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**A GUIDE**  
to  
*Better Gardens*

# INLAND SEED COMPANY

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SPOKANE, WASHINGTON

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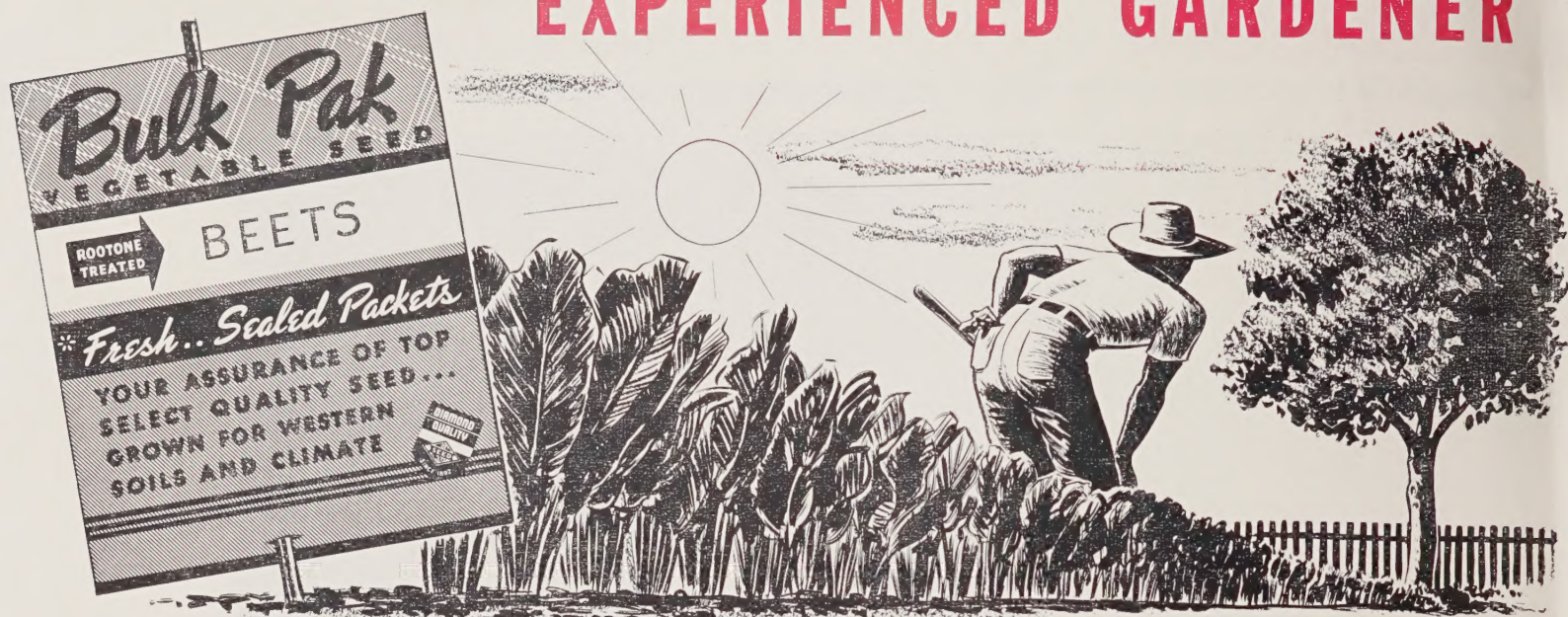
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# The Sign of an EXPERIENCED GARDENER



The experienced gardener knows the importance of quality seed. He knows the cost of the seed is the smallest part . . . yet the most important for a bountiful harvest. *Bulk-Pak* vegetable seed in sealed packets is your assurance of fresh seed . . . true to type and variety. No chance of mixing when they are packed and sealed at the source.

The experienced gardener knows it's economical too . . . specially designed packing machines enable safe handling and packing of Diamond Quality Seed. This savings is passed on to you. Small seeds such as Beet, Carrot, Radish, Onion, etc., are packed in convenient half-ounce packets. Enough seed for an average large family garden. The larger seeds . . . Peas, Beans and Corn, are available in half-pound packages. All varieties are sold at the standard prices of seed in bulk.

The experienced gardener knows it saves time in shopping . . . no matter how busy your seed dealer is with the rush of early spring business, you can serve yourself. Select the *Bulk-Pak* seed for your garden from the convenient display . . . and you're on your way.

This year, join the ranks of experienced gardeners . . . buy fresh *Bulk-Pak* Diamond Quality Seed.

## NOW... Rootone Treated VEGETABLE SEED

Rootone, the hormone material that speeds up root action on tender, young plants, has been added to the more popular varieties of Bulk-Pak vegetable seed. Earlier crops . . . tender and tasty from your garden.







# VEGETABLE GARDENS PAY DIVIDENDS

## ASPARAGUS

**Asparagus** is not a difficult crop. Indeed, it will grow after a fashion almost anywhere, if it does not have to stand in a water-logged or sour spot, but it cannot be cropped quickly, and it requires lots of room. It is for the permanent garden and there, with reasonable care, it will endure for 20 years, providing an attractive green background through the summer months after the cutting season is over.

This crop succeeds best in rich sandy loam, with good underdrainage. Avoid planting near trees, or tall shrubs, which cause excessive shade and take too much fertility from the soil. Set plants at least 20 inches apart, and place them in a permanent location. **Packet, 10c.**

## BEANS

**No American garden**, however small, is complete without a row of beans. They will grow almost anywhere, provided they have warmth with a reasonable amount of moisture and plant food. Under such conditions, and with proper protection from pests, they produce abundantly, and being legumes tend to leave more nitrogen in the soil.

In habit of growth, there are two types: bush, and climbing or pole beans. Many varieties or both are available, some with green pods, a lesser number with wax pods, and of both these, the new and better varieties are stringless. Others are not grown for their pods, but for shelled beans, eaten green when immature or after full growth.

**GREEN POD BUSH.** This is by far the more popular type and the choice of varieties is correspondingly great. A preference may be felt as to the shape and shade of the pods, and of those that are round in section. **Stringless Green Pod** may be ranked first—a hardy and productive variety with light green, stringless pods. Next would come **Tender Green.**

**Packet, 10c; 1/2 pound, 25c; pound, 45c.**

**Stringless Green Pod** (54 days): Pods 5 1/2 to 6 inches long. Nearly round, slightly curved. Medium green, stringless and fiberless. Seed coffee brown.

**Tender Green** (54 days): Pods 6 to 7 inches long, round, fleshy, stringless, dark green. Seed mottled buff and purple.

**Stringless Black Valentine** (54 days): Pods 6 to 6 1/2 inches, slightly curved. Oval, dark green and stringless. Seed solid black.

**Dwarf Horticulture or Cranberry** (54 days): Pods 5 to 6 inches long. Thick, flat green at early stages, splashed with carmine at maturity. Seed oval, pinkish butt. Spotted and streaked with maroon.

**Broad Windsor (Fava Bean)**: Pods 5 to 6 inches long. Green shell beans, large, flat, light green. Seed reddish brown with black eye.

**Canadian Wonder** (68 days): Pods 7 to 7 1/2 inches long, light green, flat, straight. Not stringless but tender. Seed large, maroon color.

**WAX POD BUSH.** The best of the round-podded type is **Pencil Pod.** Its seeds are black. **Golden Wax** has white seeds with a little mottling, but is not quite of such good eating quality.

**Packet, 10c; 1/2 pound, 30c; pound, 55c.**

**SHELLING BEANS.** The variety most generally used is **Dwarf Horticultural.** It is also known as **Speckled Cranberry Beans**, which indicates the sort of shell bean it produces. The pods are as good as snap beans if eaten young.

**GREEN POD POLE.** Being a much larger plant, the pole bean can bear many more pods than the low bush. But more space per plant is required, and the providing of poles or other support such as trellis means more work for the gardener. In general, therefore, the bush beans are much more popular. Yet that favorite, **Blue Lake**, well rewards the gardener for his pains by its clusters of long, straight green pods. These are to be picked as soon as they reach full size and not allowed to grow more mature as they then become somewhat fibrous.

**Oregon Giant** is another very popular pole bean with its large, tender, light green splashed with red, pods.

**(Green Pod Pole)**  
**Packet, 10c; 1/2 pound, 25c; pound, 45c.**  
(except as noted)

**Blue Lake** (65 days): Pods 5 1/2 to 6 inches long, straight, round, dark green and stringless. Seed white.

**Oregon Giant Green Pod** (65 days): Pods large, fleshy, 10 to 12 inches. Stringless, light green splashed with deep red.

**Packet, 10c; 1/2 pound, 30c; pound, 55c.**

**Kentucky Wonder** (65 days): Pods 8 1/2 to 9 inches long, round, curved and silver green in color. Seed buff and brown.

**Tall Horticulture** (70 days): Pods 7 1/2 to 8 inches long, oval, straight and dark green when young. Seed buff splashed with red.

*This Coupon Worth*

**10c**

**TOWARD PURCHASE OF 1/2 OUNCE  
BULK-PAK WHITE TIP RADISH SEED**

**THIS COUPON EXPIRES MAY 31, 1950**

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COUPON**



**WAX POD POLE.** This type is little grown and the pods are not usually of such good quality as the bush wax varieties. **Kentucky Wonder Wax**, the best known of the varieties, is brown-seeded.

**LIMA BEANS** are even more intolerant of cold and take longer to ripen. In sowing, the seed of the larger bush varieties is usually set a little farther apart—three to four inches—and probably two plantings will be sufficient. The seeds are to be set with the eye down and there should be enough soil moisture to induce germination.

**Packet, 10c; ½ pound, 30c; pound, 55c.** The bush variety Limas include **Burpee Bush**, which is perhaps the best one, second, the **Baby Lima**, known in the South as a butter bean, of which **Henderson's Bush** is the best known. Its beans are small, green when young, but at later stages both green and white beans occur. For a pole variety, the **Oregon Pole Lima** is best adapted to our Northwest climate. A vigorous grower, pods at their best turning yellow. The seeds are white, plump and oval.

## BEETS

While beets will grow in any average, properly drained garden soil, they must be grown quickly if the roots are to be tender and succulent. The soil should, therefore, be well prepared, so as to provide adequate moisture and plenty of plant food.

Beets may be sown as early as the ground can be made ready. Eighteen inches apart is a satisfactory separation for the rows though they can be three or four inches nearer if space is limited. Early spring planting should be to a depth of approximately ½ inch. In summer, for late beets, it may be as much as 2 inches in order to secure moisture. It is recommended to make staggered plantings every two weeks, so as to assure tender, young roots throughout the summer. When seedlings are about three or four inches tall, they should be thinned to approximately 4 inches between plants in the row.

**Varieties.** Probably the best early globular beet is **Market Gardener**, requiring 7 to 8 weeks, and preceding the well-known **Detroit Dark Red** by about 10 days. Both of these are first class for either table use or canning, being of good shape and dark color. A packet of seed will sow about 30 feet of row, one ounce will sow approximately 150 feet.

**½ ounce, 15c; ounce, 25c. Also Packets.** **PSC Gardener** (45 days): Roots deep red, globe shaped.

**Detroit Dark Red** (55 days): Globe shaped, uniform size.



**META** attracts and kills slugs right on the spot. Protect your garden from these night feeding pests that cause so much damage each spring. Simply place a teaspoon of bait every foot or so throughout your garden. Slugs can't resist it . . . nor can they live through it.

1 lb. pkg., 35c; 3 lb. pkg., 75c

**Early Blood Turnip Beet** (55 days): Tops large, roots nearly round.

## MANGEL WURZEL

Commonly known as stock beets, this vegetable makes excellent fresh feed for cattle. Seed should be planted early in the spring in rows 2½ feet apart, and plants thinned to 10 inches apart in rows after seedlings are up. One ounce of seed plants approximately 100 feet, and 5 pounds to the acre.

**Heavy Cropper** is the most popular of this vegetable, producing large yellow mangels that are easily pulled as it grows two-thirds above the ground. **Half Sugar Mangels** double the yield of sugar beets with large smooth, creamy white roots.

**½ ounce, 15c; ounce, 25c; ¼ pound 75c. Also Packets.**

## BROCCOLI

Two very distinct members of the cabbage group are known as Broccoli. One is the old fashioned **Cauliflower Broccoli**, really a very late maturing Cauliflower, the other described variously as **Sprouting** or **Italian Broccoli**. It is one of the oldest of cultivated vegetables, long known in America, but so infrequently grown in gardens, it is often referred to as new. It is now rapidly gaining in the popularity it merits. Even in the kitchen, it is kind, for no disagreeable odor arises from its cooking, such as informs the whole household when Cauliflower or Cabbage is on the menu.

Like Cauliflower, **Sprouting Broccoli** is a plant of cool and moist conditions of growth. Seed is best started indoors about six weeks before the frost is expected to be out of the garden and handled in flats or frames just as cabbage or cauliflower would be. One packet will afford sufficient seed for even a large family garden. Transplanting takes place as soon as possible to rows 30 inches apart, or somewhat nearer if space is limited; the plants being set two feet apart in the row. The heads should be ready about 60 days later. **Italian** (102 days): **Packet, 10c; ½ ounce, 45c.**

**St. Valentine** (140 days): **Packet, 10c; ½ ounce, 65c.**

## BRUSSEL SPROUTS

There are those who swear by Brussel Sprouts and those who swear at them. One reason for lack of success is failure to appreciate the fact that this is a cool weather vegetable, which takes about three months to mature.

Brussel Sprouts are sown and grown as would be late cabbage. In estimating the number of plants to raise, it may be expected that each will produce a quart of sprouts if all goes well. A packet of seed will suffice the average garden.

**Packet, 10c; ½ ounce, 40c.**

# Cultivation



1. Regular cultivation is important in growing healthy, productive plants. In uncultivated soil, moisture escapes rapidly through multitudes of tiny tubes between soil particles. Cultivated surface breaks up these capillary tubes . . . preventing the loss of moisture and nutrients.



2. Good tools make gardening more fun and produce better crops. Four-prong cultivator leaves soil fine-textured. Standard hoe is fast and best where space permits free action. Warren hoe is ideal among plants and for making furrows. Cultivator hoe is a two-purpose tool.



3. Cultivation helps prevent shallow roots, thus stops wilting during hot weather. Natural action of bacteria in releasing available fertilizer to plant roots requires cultivated ground. Don't hoe too close to the plant as this will destroy feeder roots and set the plant back.



4. Mulching benefits all growing plants. Fertilize and cultivate the top soil and water thoroughly. Cover the area with 1 to 2 inches of peat moss, Terra-Lite or compost. This will prevent a great deal of summer weeding and will also reduce the required amount of watering during hot weather.



## CABBAGE

**Cabbage is not difficult to grow.** It is useful in succession cropping. It is welcome in the kitchen, and it is one of the staple health foods, rich in vitamins, particular in C, and also in minerals.

Cabbage is naturally a cool weather plant, but it is hardy and will tolerate considerable differences of temperature, provided it has an adequate supply of moisture. It produces best with an abundance of sunshine and an ample supply of plant food, especially nitrogen and potassium.

The many varieties of cabbage may be arranged in three groups, Early, Mid-season and Late, of which the first is the most important. The Mid-season and Late varieties are only planted over a long season.

**Packet, 10c; ½ ounce, 40c; ounce, 75c.**  
(except as noted)

Among the early sorts, **Early Jersey Wakefield**, a little pointed cabbage, long led the field, but has now been largely superseded by **Golden Acre** which is just as early, about two months from transplanting, and **Copenhagen Market**, both globe shaped, very solid and neat.

**Early Jersey Wakefield** (63 days): Head small, compact, conical, short stems.

**Packet, 10c; ½ ounce, 35c; ounce, 60c.**

**Copenhagen Market** (70 days): Heads small, round and solid.

**Golden Acre** (64 days): Heads small, round. Plants dwarf.

**Early Fat Dutch** (90 days): Heads flat, solid and very large.

**½ ounce, 30c; ounce, 50c.**

Of the late cabbages, which take about 4 months from transplanting, there are two types, the round, best typified by **Danish Ball Head**, and the flat, best known in the old late **Flat Dutch** variety. These are both large heads, weighing about 6 pounds, solid and more suitable for storage through the months of winter than the quicker growing varieties.

**Danish Ball Head** (203 days): Heads round, very hard and crisp.

**Celery Cabbage** (75 days): Heads cylindrical tapering, green.

**Savoy** (95 days): Heads round. Leaves coarsely crumpled.

**Red Stonehead** (100 days): Heads round. Color purplish red.

## CARROTS

**The most popular vegetable** of the garden is the carrot. No other vegetable gives so much in return for so little work expended. Then, too, this vegetable finds many uses in the kitchen where it can be served either raw or cooked, and with almost any type of meal. There are three types best suited for the average home garden, and it is merely a matter of personal likes in making your selection. The long slender type, popular with commercial growers, is known as the **Imperator** and does very well in home gardens, providing the soil is not rocky. The medium sort, cone-shaped **Chantenay**, is very useful for planting in heavier soils. Also in this group is the **Danvers Half-Long**, which is similarly conical, but longer. The third type, and one of the most popular, is the cylindrical **New Coreless**, or **Nantes Carrot**, which is a genuine stump-rooted variety, solid and uniform in size. Seeds should be planted in successive sowings, about two weeks apart, in order to have young carrots always coming on. Rows should be 15 inches to 18 inches

apart, and the carrots should be thinned to about 4 inches apart in the row. If the soil is not rich, apply a complete commercial fertilizer at the rate of 10 pounds per 100 foot row. Two or three packets of seed is required for a family of 5. One ounce of seed will plant a row 100 feet long.

**½ ounce, 15c; ounce, 25c. Also packets.**

**Imperator** (77 days): Roots 7½ to 8 inches long with sloping shoulders, smooth, deep orange. Uniformly tapered to blunt end.

**PSC Coreless** (70 days): Stump-rooted type. Longer than other types. Crisp, solid and uniform in size and color.

**Danvers Half Long** (75 days): Medium length tapering to blunt end. Good color and fine quality. Sweet, crisp and tender.

**Improved Chantenay** (72 days): Roots 5½ to 6 inches long. Deep orange, smooth tapered, stump rooted.

**Long Orange** (68 days): Heavy cropping variety, 11 to 11½ inches long.

**Oxheart** (72 days): Roots 4½ to 5 inches long. Bright orange, blunt end.

## CAULIFLOWER

**This epicurean vegetable** is esteemed by many connoisseurs as the best of all the cabbage tribe. It is more difficult to grow than any other plant of the cabbage family, and like most of them will not stand heat or drouth, which limits its culture to areas free of these conditions. The ideal soil for cauliflower is very fertile and moist, but well drained. Good preparation and enrichment are therefore necessary, and especially on sandy soils, humus will be incorporated to good advantage.

It is best to start seed in flats or frames, the same as for cabbage, transplanting to their permanent spot in the garden after the danger of frost is passed. The distance between plants should be 2 feet, with approximately 3 feet between the rows. Twenty-five plants will probably be enough for a family of 5. A packet of seed is ample in most cases.

**Mt. Hood Snowball** is the best early variety for this section of the country, having pure white, fine quality heads of medium uniform size. **Early Snowball** is another popular variety, which produces medium to large round heads that are pure white when blanched.

**Packet, 10c; ¼ ounce, 65c;  
½ ounce, \$1.25.**

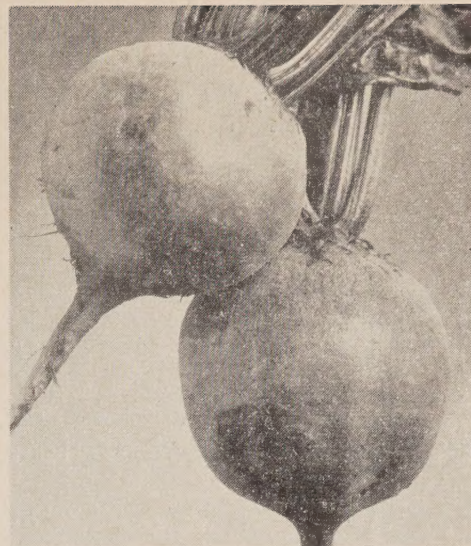
## CELERIAC

**This type of celery** does not produce edible stalks, but instead a bulbous base of about 3 inches in diameter, very useful in the concoction of celery soup, or celery sauce. It is also an excellent vegetable in its own right when served in the manner of turnips, or sliced thinly into a salad bowl. It is raised in the same manner as celery.

## CELERY

**Celery is such a fastidious plant**, and demands so much from the garden, that under ordinary circumstances, its production is better left to specialized commercial growers. Briefly, the conditions for celery growing are a light soil, full of humus and fertilizer, continuous moisture and persistent attention of the gardener. **Golden self-blanching** is probably the best all-around early variety and **Utah**, which is the standard pascal type, is recommended for the late crop. A packet of seed will produce ample plants for an average family.

**Packet, 10c; ½ ounce, 40c; ounce, 75c.**



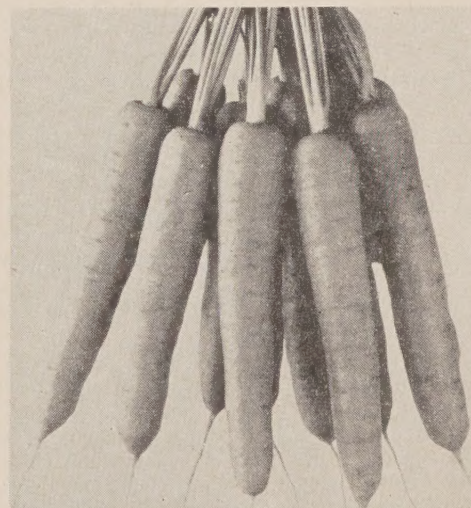
BEETS, DETROIT DARK RED



BROCCOLI, ITALIAN



CABBAGE, EARLY JERSEY WAKEFIELD



CARROT, IMPERATOR



## CHICORY

One of the easiest vegetables to grow and one of the most rewarding through the following winter is the chicory known as **Witloof**, which is to say white leaf. It is delicious in salads when used as Endive or Coos Lettuce with French Dressing. The leaves and stems blanch easily. Sow the seed thinly in the row, cover it lightly, and firm it down. Restrain the weeds until the chicory is big enough to smother them. Thin the plants to six inches apart when three or four inches high, using the thinnings either to extend the row or to be boiled for greens. A packet of seed will easily plant a 25 foot row, which is ample for the average family.

Packet, 10c.

**Witloof:** Type grown for greens. Leaves and stems blanch easily.

**Large Rooted:** Roots of this plant used as coffee substitute.

## CHIVES

The famous Schnittlauch . . . highly prized for flavor. Best to start seed indoors, transplanting to the open garden after spring frosts have passed. Sow seed thickly so as to form a clump of young plants. Plant entire clump as one plant. Packet of seed ample for the average family needs.

Packet, 10c; ½ ounce, 60c.

## SWISS CHARD

**Chard** would be better known and more highly appreciated if it were more frequently on sale, but it is essentially a vegetable for the home garden, as it is ill-adapted to shipping, in addition to the fact that the leaves are gathered singly, and not the whole plant. The plants are cultivated like beets, except they should be thinned to eight to 10 inches apart. There are several green varieties, the best being **Lucullus** with crumpled yellowish green leaves and **Broadtail** green chard.

Packet, 10c; ½ ounce, 15c; ounce, 25c.

**Rhubarb Chard**, a new variety that looks like rhubarb. The leaf stocks are a bright delicate translucent crimson. This rich color extends through the veins into the dark green leaves. It has a delicious flavor and is easily grown in most all types of soil and climatic conditions.

## CORN

**Sweet Corn** is a backbone crop for every home garden. It can successfully be grown in almost any State in the Union. However, for best results, it requires a growing season of 70 to 80 days with plenty of summer heat. In marking off the plot for corn, it is well to remember that the formation of kernels depends on efficient pollination, and, as the pollen is diffused by air, a long single row is less likely to be well pollinated than several short rows in a block.

Four rows of 25 feet are therefore better than one long row of 100 feet, and the corn may alternatively be set in hills, or groups, of three plants each, with three feet between hills. Rows are best, but hills make weeding easier.

Corn needs fertile soil, well drained but retentive of moisture, and if an old rotted manure or compost pile is available, the corn plot is a good place to use it. Or a complete fertilizer of such analysis as 4-12-4 or 6-10-4, on average loam soil, may be worked in at the rate of about seven pounds to a 100 foot row. This

preparation should be done as soon as the frost is well out of the ground, a week or two before the seed is sown.

**Varieties.** For wide adaptability to the growing conditions of different areas combined with yield and quality, **Golden Cross Bantam** is at present the best sweet-corn hybrid. It is a strong-growing midseason type, resistant to wilt, with large yellow ears of excellent eating quality. Some of the other popular hybrids that are popular with many gardeners are the **Marcross**, **Bancross**, and **Spancross**. In most sections, these varieties produce earlier corn, but the ears are smaller.

Among the open-pollinated varieties **Golden Bantam** and **Improved Golden Bantam** are still the favorites.

### YELLOW VARIETIES.

Packet, 10c; ½ pound, 20c; pound, 35c. **Golden Bantam** (78 to 80 days): Ears 7 to 8 inches long with 8 rows of kernels. Excellent for early planting.

**Improved Golden Bantam** (80 to 82 days): Ears 6 to 8 inches long with 10 to 14 rows of kernels to the ear. Light yellow color, best midseason variety.

**Golden West** (68 to 70 days): Ears 6½ to 7 inches long, 10 to 12 rows of fairly broad yellow kernels.

**Early Sunshine** (72 to 76 days): Ears 6½ to 7 inches long with 10 to 12 rows of kernels. Good early market variety.

### YELLOW HYBRID.

Packet, 10c; ½ pound, 25c; pound, 45c. **Golden Cross Bantam** (83 to 85 days): Ears 7½ to 8 inches long with 10 to 14 rows of kernels, medium in width and depth. Rich yellow color.

**Bancross** (68 to 70 days): Ears 7 to 9 inches long. 8 to 12 rows of deep yellow kernels. Excellent quality for garden or market.

**Marcross** (76 days). Stalks short but sturdy, highly resistant to bacterial wilt. Ears long, plump, abruptly tapered at tips; 10-14 rowed, with light cream-yellow medium-broad kernels of good quality.

**Spancross** (66 days): Medium size ears 6 to 7 inches long. 12 rows of uniform yellow kernels. Extra early and wilt resistant.

### WHITE VARIETIES.

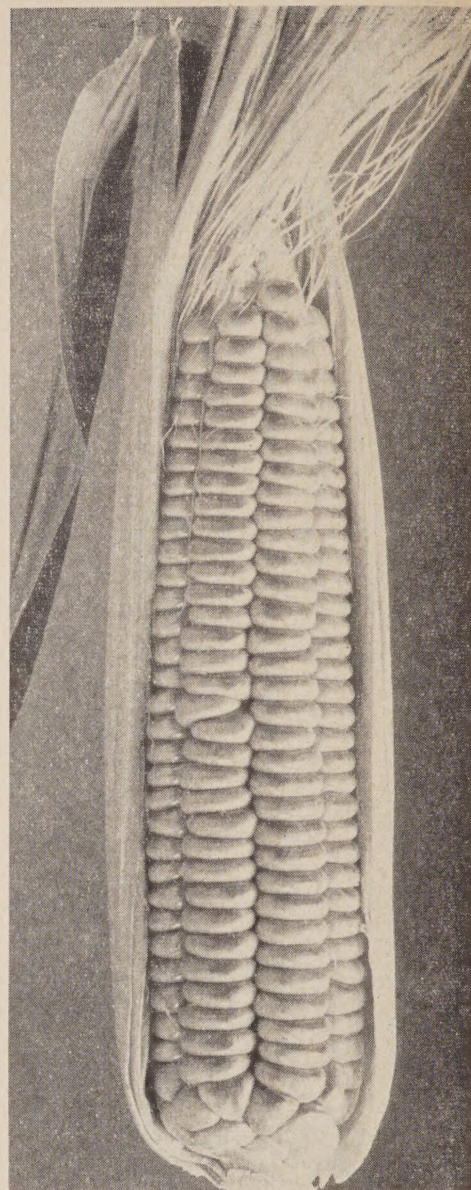
Packet, 10c; ½ pound, 20c; pound, 35c. **Stowell's Evergreen** (95 to 100 days): Ears 8 to 9 inches, 16 rows of deep, white kernels. High yielding variety, excellent for canning.

**Oregon Evergreen** (80 to 85 days): Ears 7½ to 8 inches, uniform medium to large ears with 12 to 15 rows. Good freezing variety.

## CRESS

Sometimes known as pepper-grass. A quick-germinating, quick-growing plant with finely curled bright green leaves, daintier in appearance than mustard and a little sharper in its pleasantly pungent flavor, which is not nearly so robust as that of water cress. Sow two or three feet at a time in the open row at the first working of your garden and repeat weekly.

Packet, 10c; ½ ounce, 15c; ounce, 25c.



CORN, GOLDEN BANTAM

## CUCUMBERS

**Cucumber vines** sprawl over so much territory that they are not admissible to the small garden.

The usual method of growing cucumbers is in hills about five feet apart each way, planting six seeds to the hill, and the best three plants from these left to grow.

Cucumber is a warm-weather crop and the sowing is not done until danger of frost is past. Because transplanting is difficult, seeds are rarely sown indoors but may be started on a piece of upturned sod or in bottomless bands. Four or five hills should afford enough cucumbers for the average family.

**Varieties.** Cucumbers are grown either for slicing or pickling. For slicing **Cubit** is a prolific white-spined variety, distinguished by unusually uniform dark green exterior color, and a long blunt end. Another popular variety is **Diamond Long-Green**, which is outstanding for its large size, fruits reaching 10½ inches to 11 inches in length. The third, an old standby of the slicing type of cucumber, is **Improved White-Spine**, which is one of the earlier types of large cucumbers.

For pickling, **Boston Pickling** is still the most popular variety, although many gardeners have other preferences.

½ ounce, 15c; ounce, 25c. Also packets.



**Diamond Long Green** (65 to 67 days): Fruits 10½ to 11 inches long. Deep green, straight, slightly tapered, flesh very white.

**Cubit** (68 to 70 days): 8 to 10 inches long. Long, blunt cylindrical shape. Dark green fruit. Heavy yielder.

**Improved White Spine** (60 to 62 days): 7½ to 8 inches long. Slim, symmetrical, dark green fruit. Heavy yielder.

**Boston Pickling** (55 to 57 days): Fruits 5½ to 6 inches, medium green and slightly tapered.

**Davis Perfect** (65 to 67 days): Excellent market type. Fruit 9 to 9½ inches long, dark green and evenly tapered at both ends.

**Colorado** (68 to 70 days): Fruits 8½ to 9 inches long. Very dark green and tapering at stem end. Small seed area.

**Snows Pickling** (56 to 58 days): Early, prolific canning type. Fruits 6 to 6½ inches, dark green with distinctly square ends.

**Lemon** (65 to 68 days): 3 to 3½ inches in diameter. Nearly round. Rich yellow lemon color, crisp and well flavored.

**Gerkin** (60 to 62 days): Grown only for pickling. Pale green, oval and uniform in size.

## DILL

An herb that is often grown along with cucumbers, has a seed as well as the herbage, which are essential in the making of dill pickles. A packet of seed will supply enough plants for the average family requirements.

½ ounce, 15c; ounce, 25c. Also Packets.

## ENDIVE

Grown as a salad herb in its own right and by some as a substitute for lettuce in summer weather, is most frequently used in late fall and early winter. It is a hardy plant unharmed by a little frost. It is grown the same as lettuce.

½ ounce, 15c; ounce, 25c. Also packets.

## EGG PLANT

Egg plant must have summer weather and lots of it. For it is a warm-weather slow-maturing species. **Black Beauty** is a standard variety, bearing four or five large purplish-black fruits of more or less globe shape. Lighter in color and longer in shape is **New York Improved**.

Packet, 10c; ½ ounce, 35c; ounce, 65c.

## KALE

A plant that should be more extensively cultivated, both for beauty and because it stands in the highest rank in regard to vitamin and dietetic value. When the rest of the garden begins to suffer dilapidation in the fall, the kale stands and provides the best of greens after frost has laid other plants low.

Kale requires the same cultural care as cabbage. When mature, the whole plant is not cut; leaves are taken as required, from the bottom, and they should not be allowed to grow so old as to be fibrous and tough. **Dwarf Green Curled** is the most extensively grown, and by far the best for Northwest gardens.

½ ounce, 10c; ounce, 20c;  
¼ pound, 60c. Also packets.

**Dwarf Green Curled** (55 days): Thickly curled brilliant green leaves. Plants grow about 8 inches in height.

**Tall Green Curled Scotch** (60 days): Grows 2 feet high. Dark green, heavily curled leaves.

**Cow Kale or Thousand Headed** (40 to 50 days): Grown only for stock feed.

## KOHLRABI

An odd looking vegetable that is cooked and served as turnips.

Kohlrabi is a hardy vegetable, unharmed by light frost, and better able to withstand drought than turnip. Its quality is much better, however, when it makes rapid growth, and for this reason the soil should be rich and moderately moist.

**White Vienna** is the variety generally grown, but some gardeners prefer **Purple Vienna** as it is thought to swell a little larger before beginning to get woody and tough. Seed is sown in the same manner as turnip, and growing habits follow the same pattern. However, plants should be thinned, at least, six inches apart.

Packet, 10c; ½ ounce, 30c; ounce, 50c.

**White Vienna** (55 days): At its best when bulbs are 2 inches in diameter.

**Purple Vienna** (62 days): Plants are small with dark green leaves.

## LEEK

A mildly flavored member of the onion family, is little known in American gardens, but esteemed by those who know its blanched stems as a valuable constituent of soups and stews, or served in the same style as asparagus. It is a very hardy plant, and, where frosts are not severe, may be left in the garden all winter.

Seed is sown in the early spring in the same manner as onions. Plants should later be thinned to from six to nine inches apart. A packet of seed is ample for the average family.

Packet, 10c; ½ ounce, 55c;  
ounce, \$1.00.

## LETTUCE

One of the first crops on the home gardener's calendar, lettuce is too often also one of the first to disappoint him. It is not difficult to raise successfully if these fundamental facts are borne in mind and operations conducted accordingly:

Salad crops to be crisp must be grown quickly, so the soil should be rich in plant food. Lettuce has a poor root system, therefore, this plant food must be readily available in the upper surface of the soil.

It is essentially a cool-weather plant, unharmed by light frost but rarely withstanding summer heat, and is to be sown, or set out, as soon as the ground can be worked. Dress the top two inches of soil with a complete plant food at the rate of 10 pounds to a 100 foot row, about one week in advance of setting out plants or planting seed.

**Leaf Lettuce** is the best type for the small home garden. These plants form a loose head of large frilly, wavy leaves, of which a few at a time are cut and are later replaced by new growth. This type is labor-saving for the gardener. In addition it is higher in vitamin content than the head type. **Oak Leaf** is rapidly becoming the most popular variety. However, many gardeners prefer **Grand Rapids**, or **Prize Head**. Both are of fine quality.

½ ounce, 20c; ounce, 30c. Also packets.

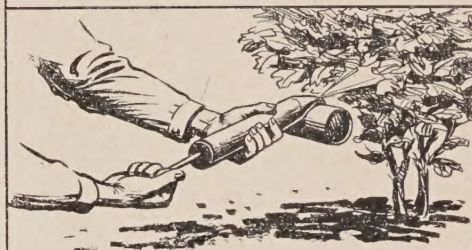
**Oak Leaf** (40 days): Withstands hot weather without turning bitter. Leaf is shaped like its name. Is small, tender and deep green in color.

**Grand Rapids** (45 days): Plants erect, compact, leaves light green, curly and heavily fringed.

# Pest Control



1. Proper equipment is the first requirement for adequate pest control in your garden. Pressure is very important as spray material must thoroughly cover all parts of the plant. Tank sprayers and the new hose sprayers are best for outdoor application. The "fly spray" type of hand sprayer for indoors.



2. Most insects and diseases are found on the underside of leaves. Therefore, if you dust or spray be sure all undersides are saturated with the material. Follow a regular program and spray or dust every week or 10 days. Many pests are microscopic.



3. Insecticides have been improved greatly in the past few years. Many new chemicals have been developed which simplify the gardener's work in this field. Multi-purpose products make it possible to use one product for nearly all pest problems. Botano DeLuxe for the garden, Rose Dust for flowers or the special Ortho Kit if you prefer spray over dusts.



4. Night feeders are responsible for much damage in western gardens. The common slug is found most everywhere . . . but he only comes out at night, so many gardeners are not aware of his presence. Place small piles of Meta Slug Bait throughout your garden. It attracts and kills right on the spot.



**Prize Head** (47 days): Plants medium size, crisp and tender. Color light red-dish brown on a medium green base.

**Simpson's Early Curled** (45 days): Leaves are large, crumpled and frilled on the edges. Color yellowish green.

**Head Lettuce.** The type grown by commercial growers, and most popular with home gardeners. Head lettuce should be started indoors in flats and later transplanted to the open garden, after the danger of frost is past. This transplanting is also important in the forcing of plants into heading. **Great Lakes** is a newer variety that is rapidly becoming the most popular with home gardeners.

**Head Lettuce:** 1/2 ounce, 25c; ounce, 40c.  
**Great Lakes** (75 days): Very resistant to tip burn and withstands summer heat. Excellent for local markets.

**PSC Crispette** (80 days): Large, firm and crisp heads. Leaves are bright green and slightly curly.

**New York** (80 days): Heads are well blanched, sweet and tender. Pioneer of long distance shipping variety.

**Hanson** (85 days): Heads are large, globular, compact. Light yellowish green in color. Good for mid-summer planting.

## MELONS

**Melons are only for the large garden** and the determined gardener who will give his vines the cultural attention they require from the outset, and will fight insects that might attack them. A long, sunny, hot season, with dry atmosphere, but sufficient soil moisture is required for good crop results. A light but well-manured soil, with mildly acid reaction, is also advantageous.

Seed should be sown in hills that are five or six feet apart each way, with approximately three plants to the hill. In the early season it is advisable to protect the young plants with hotcap paper covers until the vines begin to run.

### WATERMELONS.

1/2 ounce, 15c; ounce, 25c. Also Packets.

**Klondike** (80 days): Large, oblong, slightly tapering and solid dark green. Flesh bright dark red. Seed small, black.

**Striped Klondike** (80 days): Shaped same as Klondike. Irregular dark green stripes on lighter background. Flesh deepest red of all melons.

**Black Seeded Ice Cream** (85 days): Fruits small, nearly round, creamy white with faint irregular pale green stripes. Flesh deep red, very firm and fine quality. Best for most home gardens.

**Kleckley Sweet** (85 days): Fruits large, cylindrical, dark bluish green with thin rind. Seed creamy white, trace of brown.

### MUSKMELONS

1/2 ounce, 15c; ounce, 25c. Also Packets.

**Hearts of Gold** (90 days): Fruits nearly round, distinctly ribbed, deep green, flesh very thick and deep salmon color. 3 to 3 1/2 pounds.

**Hale's Best** (80 days): Exceptionally thick, deep salmon colored flesh. Fruits 3 to 4 pounds.

**Banana** (98 days): Fruits smooth and slender. Creamy yellow exterior. Flesh salmon color with banana-like flavor. 5 1/2 to 6 pound each.

**Casaba Golden Beauty** (78 days): Wrinkled, bright golden yellow skin. Fruits globular shaped and mature early. Flesh is white.

## MUSTARD

The popular "Greens" of the South, and a vegetable that should be encouraged for Northern gardens, as it is extremely hardy, and the foliage when cooked like spinach presents a tasty dish that pleases the most particular taste.

The variety chiefly grown is **Southern Giant Curled**. Seed is sown in the garden a little at a time in the spring and fall; seedlings coming up quickly and are thinned to stand about three inches apart. When the plants are four inches high, they may be cut for salads, and when they have reached a growth of six inches, or more, they are excellent for cooked greens. A packet of seed will supply enough for the average garden.

1/2 ounce, 15c; ounce, 25c. Also Packets.

## ONIONS

**Onions are found in most American gardens**, though results are often disappointing, because cultural requirements have not been given sufficient attention. Particularly in the matter of weeding. The soil should be worked into fine tilth without clods, stones, etc., to a depth of about six inches and well enriched. Either well rotted manure or commercial fertilizer may be used. If manure is selected, be sure that it is well rotted.

**Early onions** are best grown from sets. **Later onions**, and particularly those intended to be kept in winter storage, may be raised from seed sown in the open. Scallions, or bunching onions, eaten when young and fresh, are successfully grown from seed.

The best green onion variety is **White Bunching**. **Oregon Yellow Danvers**, and **Sweet Spanish**, are the most popular large globular onions.

Packet, 10c; 1/2 ounce, 40c; ounce, 75c.

**Oregon Yellow Danver** (110 days): Bulbs three-quarter globe shape. Dark yellow skin, white flesh. Excellent for storage because of hard skin.

**Australian Brown** (100 days): Bulbs semi-globe. Chestnut brown, tough, tight filling skin. Flesh creamy white.

**Southport White Globe** (110 days): Bulbs round, medium sized, firm and pure white. Thin skin, fine grained, waxy white flesh.

**Sweet Spanish** (110 days): Large globular onion, with golden yellow skin. Flesh is white, mild and very sweet.

**White Bunching** (30 to 40 days): Best for green onions. Young sprouts are crisp and mild, attaining good size before bulb is formed.

**White Sweet Spanish** (110 days): Bulbs globular, small neck and pure white. Flesh clear white, firm and mild.

**White Bermuda** (93 days): Bulbs clear white and mild enough to eat raw. Ideal for frying with meat.

**Yellow Bermuda** (93 days): Bulbs light straw yellow, flesh nearly white. Sweet and mild.

## OKRA

Another familiar plant of the Southern gardens, and not too well known in the North. It is very easily grown and has ornamental value for your vegetable garden. The long pods are used, either green or dried, in stews and gumbo type soups. They may also be served as a vegetable when picked young and tender. The Dwarf Green variety is the most popular for home gardeners. A packet of seed is ample for the average family.

1/2 ounce, 15c; ounce, 25c. Also Packets.



## keep pests away night and day

Shiny aluminum strips crackle and flash. Scares robins, pigeons, all birds and animals from gardens, bushes and trees. Protects seed as well as crops. Easy to use.

Package of 10 only 25c  
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## PARSLEY

**Parsley is so easy to grow** and so much used for flavoring and garnishing that a short row should be in your garden. Seed is sown in the row as early as possible, may be soaked overnight first, as it is slow germinating. The plants later thinned to about six inches apart.

The principal variety is **Extra Double Curled**, which is compact, and has dark, bright green leaves. A packet is enough for the average family.

**½ ounce, 15c; ounce, 25c. Also Packets.**

## PARSNIPS

**Parsnip is a cool-weather, long-season plant**, and one of the easiest vegetables to grow. It is one of the most nutritious vegetables, but it has not attained great popularity, possibly because it is not always prepared in the kitchen as it should be.

Soil conditions should be similar to turnip or onion. Cultural directions are the same as most other root crops. A packet of seed should be sufficient for a 50-foot row.

**½ ounce, 15c; ounce, 25c. Also Packets.**

## PEAS

**The pride and joy of every home gardener** is a lush crop of early green peas. They are among the first rewards of the season, and the garden produces nothing that it at once so nutritious and so delicious.

It is not unduly difficult to attain a crop that will bring a sparkle to the eye of even the most seasoned gardener. The prime consideration is early preparation of the soil and this must be thorough, as peas like a good seed bed of mellow earth well worked into fine tilth. It should be undertaken just as soon as frost leaves the ground. When proper soil preparation has been reached it is advisable to work in a good complete fertilizer at the rate of about 2 pounds per 100 foot row.

One pound of seed will plant a row 100 feet long, which is about the required amount for a family of four or five persons. To develop a heavier root system, thus quickening the growth, **it is advisable to inoculate the seed** before planting. A small 10-cent packet of inoculation is more than enough to treat seed required for the home garden.

The dwarf, or low-growing type of garden peas, is the most popular with the majority of home gardeners, as it requires less work. **Little Marvel**, and **Laxtonian** or **Blue Bantam** are the most popular of these low-growing varieties. These two varieties are excellent for canning and freezing.

The most popular of the taller varieties are **Gradus** and **Tall Telephone**. They are also good varieties for canning and freezing.

**Packet, 10c; ½ pound, 20c; pound, 35c.**

### EARLY VARIETIES

**Alaska** (58 days): Height of vine 30 inches. Pods 3 inches long, blunt, straight. 6 to 8 peas to pod. Used extensively for canning.

**Gradus** (65 days): Vine 36 inches, pods 4 inches long, broad, plump and pointed. 8 to 10 peas to pod. Excellent freezing variety.

**Laxtonian or Blue Bantam** (64 days): Vine 18 inches high. Pods 4½ inches long, broad, slightly curved and pointed. 6 to 7 peas to pod.

**Little Marvel** (63 days): Vine 18 inches high. Pods 3 inches long, blunt and plump. 7 to 8 peas to pod.

**Laxton Progress** (64 days): Height of vine 18 to 20 inches. Pods 4½ to 5 inches, pointed and some curved. 7 to 9 peas to pod. A good freezing variety.

### LATE VARIETIES

**Home Freezer Peas.** A prolific strain of garden peas . . . that's really "sweet eatin'." A wilt resistant hybrid, especially adapted for home freezing. Vines grow about 30 inches high, producing dark green "double pods" that are ready for freezing in approximately 68 days from planting.

**½ pound packet, 20c; pound, 35c.**

**Tall Telephone** (74 days): Vines 40 inches high. Pods 4½ to 5 inches long, broad, plump and straight. 8 to 10 peas and a good freezer.

**Dwarf Gradus** (65 days): Height of vine 22 inches. Pods 4½ inches with 8 to 10 peas. An excellent variety for freezing.

**Stratagem** (80 days): Vines 25 inches tall. Pods 4½ inches long, narrow, straight and pointed. 8 to 10 peas to the pod.

## PEPPERS

**For all practical purposes**, peppers are grown similarly to egg plant. Seedlings may be raised indoors, but when the popular varieties are to be grown, many gardeners prefer to buy their young plants from their local seed store. Continuous warm weather is required for the best results. A moderate dressing of commercial fertilizer hoed into the soil after plants are well established, adds greatly to the productivity of peppers.

**Packet, 10c; ½ ounce, 40c; ounce, 75c.**

**California Wonder** (75 days): Fruits mostly 4 lobed, thick, sweet and mild. Deep green changing to crimson at maturity.

**Bell or Bull Nose** (64 days): A prolific early variety. 4 lobed fruits, deep green, turning to brilliant scarlet at maturity.

**Chinese Giant** (70 days): Extremely large sweet pepper. Fruits are pendant and square-ended.

**Ruby King** (68 days): Fruits usually 3 lobed and very productive. Flesh thick, sweet and mild.

**Perfection Pimento** (73 days): A canning variety with smooth, heart shaped fruits. Dark green, changing to crimson at maturity.

**Cayenne** (70 days): The favorite hot pepper. Fruit 4 to 5 inches long.

## PUMPKIN

**Pumpkins sprawl** over so much territory, they are generally ruled out of small home gardens, just as melons. Where space is available, the small **sugar pumpkin** makes the best pies. Cultural directions are similar to those of muskmelon, except the hills should be a foot further apart each way.

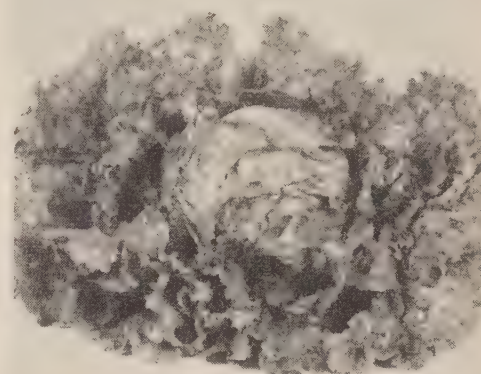
**½ ounce, 15c; ounce, 25c. Also Packets.**

**Large Yellow or Connecticut Field** (118 days): Grown for stock feeding. Large, round and deep yellow. Very productive and a good keeper.

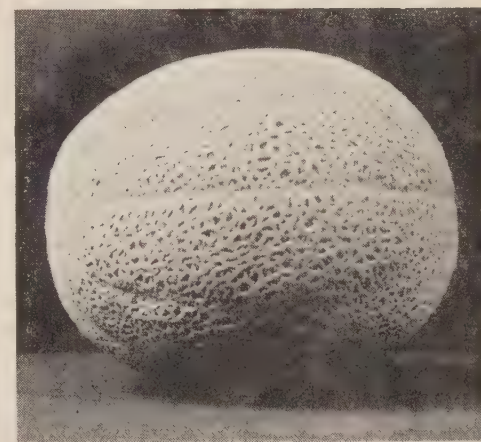
**Giant of All** (125 days): Almost globe shaped. Skin rich golden yellow. Flesh is firm, fine-grained and deep yellow. Excellent quality.



LEEK



LETTUCE, GREAT LAKES



MUSKMELON, HALE'S 'BEST



ONION, EARLY YELLOW GLOBE



**Winter Luxury** (100 days): Excellent pie pumpkin. Medium size. Color golden russet, finely netted. Flesh is deep golden yellow.

**Sweet or Sugar** (108 days): The best small "Halloween Pumpkin". Very good for pies. Skin orange, flesh deep yellow.

## RADISH

**Radish is the simplest** of vegetables to grow and the quickest to make returns. It will grow almost anywhere, provided it has enough moisture, but if it is to be crisp, it should have readily available plant food in a rather loose, fine soil.

Sow spring radishes as early in the season as desired, approximately a week's supply at a time. Thin the plants to stand an inch apart and keep the weeds under control. Summer radishes require a little more space, and the winter sorts should be spaced about three inches. To keep the worms out, work crude naphthalene flakes into the soil, approximately one week before sowing seed.

There are several varieties from which to select, and personal tastes will be the deciding factor. **Early Scarlet White Tipped** is the most popular of the round, small, red radishes. **French Breakfast**, which has oblong shaped roots, is preferred by many. For a pure white radish, the **Iceberg**, with its long slender roots is the first choice among many home gardeners. The two leading winter varieties are **China Rose Winter**, a red radish, and **Long Black Spanish**, which has a black skin and white flesh.

**1/2 ounce, 15c; ounce, 25c. Also Packets.**

**Early Scarlet White Tipped** (20 days): Roots nearly round, carmine red with small white tip. Flesh white, crisp and mild.

**French Breakfast** (25 days): Roots oblong, thicker toward the bottom. Dull scarlet with white tip. Flesh white and crisp.

**Early Scarlet Globe** (23 days): Solid red roots that are olive shaped.

**Early Scarlet Turnip** (26 days): Roots round and slightly flattened.

**White Iceberg** (27 days): Roots long, slender and clear white.

**Crimson Giant** (28 days): Large, globular shaped roots. Deep crimson.

**China Rose Winter** (52 days): Winter variety. Roots long, thicker at lower end. Bright rose color.

## SALSIFY

The vegetable oyster, as it is commonly called, because of its oyster-like flavor after it is cooked, deserves to be more generally grown. It is a root of pleasing texture and flavor and is cultivated precisely as parsnips, except that salsify, being slimmer, may stand a little closer in rows. The leading variety is **Mammoth Sandwich Island**.

**1/2 ounce, 30c; ounce, 50c. Also Packets.**

## SPINACH

**Spinach is sown in the open** as early as possible, setting the seeds an inch apart and a half inch deep in rows 12 to 15 inches apart. Weekly sowings should be made, the last one about the first of June. The plants are thinned to stand 5 inches

apart in the rows and weeds must be kept down. To encourage leaf development, add nitrogen halfway through the growing period, troweling in a little nitrate of soda or sulphate of ammonia along the row, or sprinkle it on the soil, in a solution of two ounces to a gallon of water. **Improved Thick-Leaf** is the most popular for home gardens.

**1/2 ounce, 15c; ounce, 25c. Also Packets.**

**Improved Thick-Leaf** (46 days): Excellent freezing variety. Leaves are large, thick and very tender.

**King of Denmark** (45 days): Stands longer than most varieties. Leaves large, rounded and somewhat blistered.

**New Zealand** (56 days): Thrives in hot dry weather. Plants large and spreading. Leaves small, thick and pointed.

## SQUASH

The extensive family of squashes falls into two broad classes: the bush or summer type, growing compactly by comparison, and producing fruits which are eaten while immature, and the vine or winter type, which sprawl widely and produce fruits eaten at maturity.

The summer type of squash may be grown handily in a medium sized home garden, as they may stand two feet apart in a row, or three to four feet apart in hills. The vining, or winter type squash requires twice this amount of space which often rules them out of the home garden with a limited amount of area for growing the various types of vegetables.

Soil should be well prepared where the plants are to stand as they have spreading shallow roots. A handful of commercial fertilizer may be worked into the soil for each hill. A packet of any one variety will be ample for family requirements.

The most popular summer types are **Zucchini** and **Cocozelle**, similar in size, shape, and flavor, the first one being lighter skinned. **Summer Crookneck** is very popular in the yellow sorts.

**1/2 ounce, 15c; ounce, 25c. Also Packets.**

### SUMMER VARIETIES

**Zucchini** (63 days): Skin is light green. Flesh pale green, thick, and tender. At best when 5 to 6 inches long.

**Cocozelle or Italian Marrow** (65 days): Skin is dark green becoming marbled with yellow at maturity. Best when 5 to 6 inches long.

**Early Summer Crookneck** (52 days): Fruits curved at neck. Skin is light yellow, thin and warty.

**White Bush Scallop** (50 days): Fruits flat with scalloped edges. Skin is creamy white; also, flesh.

In the vining type or winter squash, **Table Queen** or **Acorn**, is by far the most popular, as the small fruits are sweet, with tender, rich, orange-yellow meat. In the larger varieties, the **Improved Green Hubbard** still ranks high in popularity.

### WINTER VARIETIES

**Improved Green Hubbard** (105 days): Fruits 10 to 12 pounds. Pointed at both ends. Dark bronze green and slightly warty.

# Fertilizing



1. For general garden and lawn needs it is best to use a complete fertilizer such as Nu Life. The hopper type spreader is most efficient and economical method for applying to lawns and open garden areas. Uniform coverage at specified quantities saves the gardener enough to pay for the unit in one season.



2. In gardens where close plantings prevent the use of a spreader it is best to apply by "ringing" the plant. Fertilizer should be placed about two inches away from the stock or base of young plants, and care should be shown in not getting any of the material on the leaves. Cultivate the soil after applying and water generously.



3. Liquid fertilizers are rapidly becoming popular with both professional and home gardeners. This material has several advantages in that plants react quickly and there is less danger of burning. Bio-Gro Liquid Fertilizer, an organic fish product, produces excellent results throughout the garden. It is especially good for plants requiring a rich diet... such as begonias.



4. There are several chemicals that can be used in conjunction with fertilizer. These have an important part in your gardening as they assist the plant in getting greater benefits from plant food and soil. Vita Flor... a vitamin B material to be used throughout the growing season on all plants. Rosetone... a new hormone especially for roses. Rootone... a hormone for seed and cuttings; speeds up establishment of root system. Transplantone... a hormone for plants at time of transplanting.



**Golden Hubbard** (100 days): Fruits 8 to 10 pounds. Rind is golden yellow and warted. Flesh deep golden orange.

**Banana** (105 days): Fruits are cylindrical with thin, smooth skin. Flesh is orange-yellow, sweet and tender.

**Table Queen** or **Acorn** (70 days): Acorn shaped fruits with dark green skin. Flesh deep orange. Excellent for baking.

**Boston Marrow** (97 days): Fruits 6 to 8 pounds. Resembles Hubbard in shape. Skin deep orange and quite hard.

## TOMATO

One of the most popular garden plants, the tomato requires a considerable amount of space, but makes very good use of it. Apart from the richness of the fruits in vitamins and dietetic value, there is nothing quite so satisfying as the delicate flavor of a freshly picked tomato from your own vine.

Tomatoes will grow in any decent garden soil, properly drained, but retentive of soil moisture and in good heart. During the harvest season, better quality fruit will be produced if a mild application of complete fertilizer is made every 10 days to two weeks.

There is now available for home gardeners a new hormone spray, which scientifically pollenizes the tomato blooms, and will greatly increase the productivity of your plants. Also, the use of this material will produce almost seed free tomatoes. It is not difficult to use, but maximum results can only be obtained where directions are followed to the letter.

There are so many varieties of tomatoes, and each year finds additional names added to the list, that it is difficult to recommend any one variety over all others. Each gardener has his own taste and preference, because of past results. From volume seed sales, it would indicate that **Bonnie Best**, **Prichard**, and **Marglobe** are the three most popular with the majority of home gardeners.

Seeds should be started in flats about a month before warm spring weather is anticipated, then, when all danger of frost is past, set out the young plants at intervals of not less than two feet, and preferably three feet apart. Set the plants a little deeper in the ground than they were in the flats and water with a starter solution.

As the plants grow, suckers or side branches spring from the axils of leaves where they join the main stem. Until fruit is set these are to be pinched out. There is almost as many theories on the best way to grow tomatoes as there are gardeners. Select one plan of growing and then stick to it. If you attempt to try every method suggested, you will probably end up with no tomato plants.

**Packet, 10c; 1/2 ounce, 40c; ounce, 75c.**

**Bonnie Best** (73 days): Fruits medium to large. Globe shaped, smooth, bright scarlet and of excellent quality.

**Early Jewel** (76 days): A heavy cropper. Fruits scarlet, globe shaped. Few seed, thick solid meat.

**Earliana** (96 days): Early, bright scarlet tomato. Medium size with smooth skin.

**Break O'Day** (68 days): Vines vigorous and very productive. Fruits globe shaped, very solid and medium size.

**John Baer** (73 days): Fruits medium size, semi-globe. Excellent for canning.

**Marglobe** (77 days): Resistant to wilt. Medium size fruits, globular in shape. A heavy producer.

**Pritchard** (78 days): Wilt resistant, producing large, vigorous vines. Fruits globular and light scarlet.

**Ponderosa** (90 days): Very large fruit of excellent flavor. Purplish pink in color. Good for canning.

**Stokesdale** (70 days): Famous among market gardeners. Heavy producer. Fruit medium size and uniform. Has wide adaptability.

**Golden Queen** (84 days): Fruits medium to large, deep golden yellow. Smooth skin with solid meat.

## RUTABAGA

Grown mainly for a winter storage crop, this vegetable is not too popular with most home gardeners. Its growing habits are the same as most of the root crops. However, it differs considerably in appearance. It is more elongated than the globe-shaped turnips, with gray-green, smooth foliage, instead of the green, hairy leaves of the turnip.

**American Purple Top** is by far the most popular variety.

**1/2 ounce, 15c; ounce, 25c. Also Packets.**

## TURNIP

The Turnip is a cool-weather plant that will grow in almost any garden, but makes its best response to a soil that is well worked and in good fertility. Spring sowing in the garden should begin as early as possible, a little of the row at a time in order to provide continuous supply.

The seed should be thinly sown in rows 12 to 15 inches apart, lightly covered, and firmed down. Generally the distance between plants should be about five inches in the row.

There are a number of varieties from which to select. However, **Purple Top White Globe** is the best for general home use.

**1/2 ounce, 15c; ounce, 25c. Also Packets.**

**Purple Top White Globe** (57 days): Roots medium size and globe shape. Flesh white, fine grained and excellent flavor.

**Purple Top White Globe** (57 days): Roots are flat with purple top. Flesh white and firm.

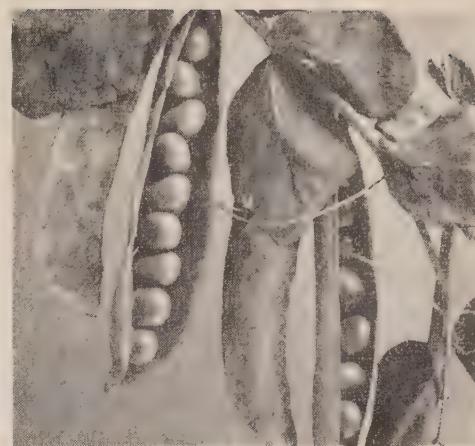
**Golden Ball** (65 days): Roots medium, round, smooth and yellow. Flesh deep yellow and fine texture.

**Early Snow Ball** (40 days): Sweet, crisp, tender roots of medium size. Round in shape and white throughout.

**Pomeranian White Globe** (75 days): Roots large, globe-shaped and weigh from 5 to 8 pounds. White throughout.

**Yellow Aberdeen** (80 days): Roots globular with purple tops and yellow on the bottom. Grown for stock feed.

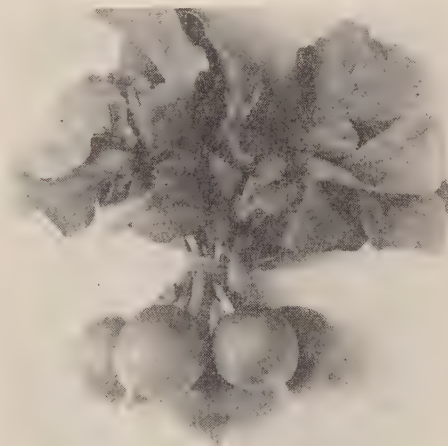
**Cowhorn** (70 days): Excellent winter cow feed. Roots white with light green shoulders. One-third out of the ground.



PEAS, HOME FREEZER



PEPPER, CALIFORNIA WONDER



RADISH, CRIMSON GIANT



TOMATOES, MARGLOBE



# FERTILIZING CHART

PLANTS	FERTILIZERS AND AMOUNTS	WHEN TO APPLY
Annuals	Balanced commercial fertilizer, elements preferably in the ratio 4-12-4 or 6-10-4. Three to 4 pounds per 100 square feet.  Balanced commercial fertilizer, 1/4 the above amount per 100 square feet.	In Spring, when preparing beds for planting. Work it into top 5 inches.  When plants are in bud stage, apply once. For long-blooming kinds, 2 applications, 8 wks. apart.
Biennials	Same as for annuals.	When new growth starts in Spring. Work it into top 5 inches.
and Perennials	Same as for annuals.	After the above, apply at six-week intervals till end of August.
Bulbs	Bonemeal. One-half inch bone-meal under 1 inch sand under each bulb.	At planting time.
House Plants, Porch and Window Boxes	Balanced commercial fertilizer, or house plant tablets. Apply in liquid form, usually 1 level table-spoonful or 1 tablet to 1 quart water.	When new growth starts in Spring and thereafter at 6-week intervals till end of October. Also, when planting (plants, not seed) or repotting, mix dry commercial fertilizer with soil.
Lawns: Old	Balanced commercial fertilizer, 3 to 4 pounds per 100 sq. ft. A rich thick lawn keeps weeds out.	As soon as last frost is out of ground, and thereafter at 6-week intervals till end of October.
New	Well-rotted manure, 2 inches for ordinary soils, 4 to 6 for heavy or sandy; plus balanced commercial fertilizer, 3 to 4 pounds per 100 square feet.	When preparing ground for seeding (preferably April or September). Spread commercial fertilizer over manure, and work them in 6 inches.
Hedges: Old	One pint balanced commercial fertilizer to each feet of row, putting half on each side.	When new growth starts in Spring and thereafter at 6-week intervals till end of August. Work lightly into soil.
New	One pint balanced commercial fertilizer to each 20 ft. of trench.	When planting. Spade thoroughly into bottom of trench.
Trees: Old	Allow 1 pound balanced commercial fertilizer for each inch of circumference of trunk, measured at height of 4 feet.	Once a year. Preferably Spring, just as new leaves begin to develop, but can be done at any time. Put it in crowbar holes circling tree at distance of greatest branch-spread, and 2 inches wide, 18 inches deep. Put 2 inches of soil in top of each hole.
New	Allow 1 pint balanced commercial fertilizer for each foot of diameter of the hole.	When planting. Spade thoroughly into bottom of hole.

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**SPRAY**  
the easy-Hayes way!



The Hayes Jr. Spray Gun lets your garden hose do all the work. Mixes your favorite liquid or powder insecticide in accurate proportions, shoots a driving, wet spray that penetrates plants, saturates and kills garden pests. Adjustable nozzle sprays up, down, sideways for hedges — with special long-stream nozzle for trees and tall climbers. Precision made of non-rust castings, with brass working parts. Full 3 gallon capacity, yet easily held in one hand. At your garden supply dealer's, only

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Also: Hayes-Ette for small spray jobs — Hayes Han-D for spot spraying — Hayes Sprinkl-Air for gentle watering — Hayes Fertl-Rain Fertilizer Applicator — Hayes Sudzit Car Washer.

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5000 Gal. large nursery and grower size. Regular or Acid Plant Chem. \$15.00

**POUR IT ON—WATCH 'EM GROW**





# VEGETABLE SEED PLANTING CHART

KIND OF SEED	Time to Plant Outdoors	Planting Distance		SEED REQUIRED		Ready to Use
		Between Rows	In the Row	Row	Acre	
Asparagus	Feb. Apr.	5-6 ft.	18-24"	1 oz.-40 ft.	2-3 lbs.	2nd Spring
Beans, Bush	Apr., May, June	2-3 ft.	3-4"	1 lb.-250 ft.	90-100 lbs.	40-65 days
Beans, Pole	Apr., May, June	4 ft.	2 1/2-3 ft	1 lb.-125 hills	30-40 lbs.	70-90 days
Beans, Lima	May-June	2-4 ft.	10-36"	1 lb.-80 hills	50-60 lbs.	90-130 days
Beets, Table	Mar.-July	14-20"	2-4"	1 oz.-100 ft.	10-15 lbs.	45-60 days
Broccoli*	June-Aug.	24-30"	14-18"	1 oz.-1500 plants	6-8 oz.	120-150 days
Brussel Sprouts*	Apr.-June	30-36"	18-24"	1 oz.-2000 plants	6-7 oz.	100-120 days
Cabbage, Early*	Feb.-Apr.	30-36"	16-24"	1 oz.-2000 plants	6-8 oz.	90-110 days
Cabbage, Late*	May and June	36-42"	24-30"	1 oz.-2000 plants	6-7 oz.	110-120 days
Carrots	April-July	12-24"	2-3"	1 oz.-250 ft.	3-4 lbs.	55-80 days
Cauliflower*	March-June	3-4 ft.	24-30"	1 oz.-1500 plants	6-7 oz.	95-110 days
Celery*	April-July	18-36"	6-10"	1 oz.-8000 plants	4-5 oz.	120-150 days
Chicory	Mar.-May, Sept.	16-20"	6-8"	1 oz.-200 ft.	3-4 lbs.	90-120 days
Chives	April and May	12-18"	4-6"	1 oz.-200 ft.	4-5 lbs.	125-150 days
Sweet Corn	April-June	36-42"	9-12"	1 lb.-100 hills	12-15 lbs.	55-90 days
Cress	Feb.-May, Sept.	12-18"	4-6"	1 oz.-250 ft.	3-4 lbs.	45-60 days
Cucumber	April-July	4-6 ft.	10-12"	1 oz.-100 hills	2-3 lbs.	50-75 days
Egg Plant*	April and May	24-30"	18-24"	1 oz.-1500 plants	4-5 oz.	125-140 days
Endive	May and June	18-20"	10-12"	1 oz.-300 ft.	3-4 lbs.	90-100 days
Herbs, Annual	March and April	20-24"	10-12"	1 oz.-200-600 ft.	3-10 lbs.	125-150 days
Herbs, Perennial	April-June	20-24"	10-12"	1 oz.-200-600 ft.	3-10 lbs.	Next Season
Kale	Mar.-Apr., Aug.	18-24"	12-18"	1 oz.-2000 plants	6-8 oz.	55-60 days
Kohl Rabi	March-May	16-24"	6-8"	1 oz.-300 ft.	3-4 lbs.	50-70 days
Leek	May-June	14-20"	4-6"	1 oz.-150 ft.	4-5 lbs.	120-150 days
Lettuce, Leaf	March-Sept.	12-18"	4-6"	1 oz.-600 ft.	4-5 lbs.	40-70 days
Lettuce, Head	February-August	12-16"	12-14"	1 oz.-3000 plants	1-1 1/2 lbs.	70-90 days
Muskmelon	April-June	6-8 ft.	4-6 ft.	1 oz.-40 hills	3-5 lbs.	90-150 days
Watermelon	May and June	8-12 ft.	6-10 ft.	1 oz.-25 hills	4-6 lbs.	100-160 days
Mustard	Mar.-May, Sept.	12-18"	2-3"	1 oz.-600 ft.	4-5 lbs.	60-90 days
Okra*	April and May	2 1/2-3 ft	18-24"	1 oz.-250 plants	5-6 lbs.	70-90 days
Onion, Seed	April and May	12-18"	2-4"	1 oz.-200 ft.	4-5 lbs.	125-150 days
Onion, Sets	Oct.-May	12-18"	2-3"	1 lb.-50 ft.	2-3 sacks	50-70 days
Parsley	Mar.-May, Sept.	18-24"	12-16"	1 oz.-250 ft.	3-4 lbs.	65-90 days
Parsnip	April-June	15-20"	2-4"	1 oz.-300 ft.	4-6 lbs.	130-145 days
Peas, Dwarf	Nov., Feb.-June	18-24"	1-2"	1 lb.-120 ft.	150-175 lbs.	45-75 days
Peas, Tall	Nov., Feb.-June	4-6 ft.	1-2"	1 lb.-120 ft.	100-125 lbs.	60-90 days
Pepper*	May and June	18-24"	14-16"	1 oz.-1500 plants	8-10 lbs.	130-150 days
Potatoes, Irish	March-June	24-36"	14-18"	1 lb.-15 ft.	3-4 oz.	90-150 days
Pumpkin	May-July	8-12 ft.	6-8 ft.	1 oz.-30 hills	7-9 sacks	75-90 days
Radish	February-Sept.	12-18"	1-2"	1 oz.-100 ft.	1-5 lbs.	20-75 days
Rhubarb	March-June	30-36"	16-24"	1 oz.-250 ft.	5-8 oz.	3rd Year
Rutabaga	May and June	18-24"	6-8"	1 oz.-400 ft.	2-3 lbs.	90-120 days
Salsify	March-May	18-24"	2-4"	1 oz.-120 ft.	8-10 lbs.	120-150 days
Spinach	Feb.-May, Sept.	12-18"	3-6"	1 oz.-100 ft.	10-12 lbs.	45-60 days
Squash, Bush	April-June	3-4 ft.	3-4 ft.	1 oz.-30 hills	4-6 lbs.	65-70 days
Squash, Winter	May-July	10-12 ft	8-10 ft.	1 oz.-15 hills	3-4 lbs.	120-140 days
Swiss Chard	March-July	12-18"	4-8"	1 oz.-150 ft.	6-8 lbs.	45-60 days
Tomato*	April-June	3-4 ft.	2-3 ft.	1 oz.-3000 plants	3-4 oz.	125-150 days
Turnip	March-August	12-15"	3-4"	1 oz.-400 ft.	2-4 lbs.	45-90 days

\* Planting dates shown for crops marked "\*" are intended to be for setting plants into the garden. Seeds should be sown 40 to 60 days earlier, indoors or under glass.

Seed should be covered from three to five times its diameter. Press soil down firmly. Keep moist continuously.

The above chart gives distances between rows for hand cultivation; where garden tractor is used the rows should be farther apart.

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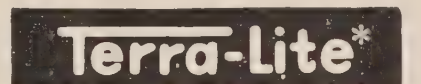
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By MAURICE VAN HOLLEBEKE

A well arranged group of Rhododendrons in full bloom is garden beauty at its best. Gardeners of the Pacific Northwest are particularly fortunate in that Rhododendrons are native of this region, so naturally react favorably to our general soil and climatic conditions. However, like any plant, proper care in feeding, spraying, pruning, and cultivation greatly reward the gardener.

### WHEN TO PLANT

If you are not concerned too greatly about blooms the first season, you can safely plant Rhododendrons practically any month in the year. The shrubs have been transplanted several times at the nursery before you buy them. They will have a good ball of dirt protecting the entire root system, preventing the danger of root shock. Use plenty of water at the time of setting out, regardless of the time of year.

If blooms are important the first season you should make your planting late in the fall, after buds have been fully developed, or from then on until blossoms start to open in early spring.

### HOW TO PLANT

As in all good gardening, soil preparation prior to planting is very important. Rhododendrons are surface plants, therefore, close, deep cultivation is not advisable after the plant is established. Soil must be properly prepared and deeply cultivated in advance so the shrub may enjoy healthy root growth for many years.

Liberal use of peat moss can't be over emphasized. A soil mixture containing 25% peat is ideal, and should be prepared to a depth of 12 inches. For Rhododendrons, the use of peat moss is preferred to other types of humus as it creates an acid condition in addition to holding moisture and opening the soil.

Like all surface rooting plants, these shrubs should not be planted deep. Dig the hole about an inch deeper than the ball. Set the shrub and then fill the remainder of the hole with water. Let this soak in to the balled root and surrounding soil and then fill in with soil, pressing well all around the roots. Water the area again with a solution containing a half cup of plant food per gallon of water.

### WHERE TO PLANT

With proper care and selection of varieties, Rhododendrons can be successfully grown in almost any spot in your garden. It is true that generally these shrubs prefer a semi-shady location. However, there are varieties such as Christmas Cheer, Unique and Unknown Warrior that have an early blooming season and will do very well right out in the open. Your local nurseryman can assist you in selecting varieties for various locations. Just remember, you are not limited to shady spots.

### FERTILIZE IN SPRING

It is now possible to buy a specially prepared plant food for Rhododendrons and other acid loving plants. This special fertilizer contains the correct amounts of the various elements required for best results.

Apply fertilizer just as the color starts to show on the buds. Ring the plant with about two handfuls of plant food, using the circumference of the shrub as a guide for the size of the ring. Work the material into the soil and water. The reason for using the blooming season rather than a specific date for a feeding schedule is that many varieties have different blooming seasons, and the application of plant food in advance of the correct time will likely force the buds into new growth, thus reducing the length of blooming time.

Avoid lime, calcium fertilizers and those consisting mainly of nitrates.

### PEST CONTROL

Strawberry Root Weevil is the principal pest to guard against. These black, hard shell bugs attack young leaves in the spring, eating holes in the center and around the edge. They later transform into grubs, going into the soil and feeding on tender roots and stems near the surface. An application of Ortho Appo Bait around the base of the shrub in spring and fall will control these pests. Added protection may be necessary where the pest has had an opportunity to become well established. In this case, dust the plant with Botano DeLuxe every two weeks, allowing a quantity of the dust to cover the ground. Botano DeLuxe is also effective in controlling White Fly and Thrips which some-

times attack Rhododendrons. The signs to look for . . . stippled and pale appearance of leaves. Undersides spotted with dark, resinous material.

Established shrubs should be watered well all during the budding season. When necessary, pruning should be done at the conclusion of the blooming season, before the plant starts to put out new growth. As soon as the blossoms wither they should be removed at the base of the flower. Care should be used as it is at this point that growth of next year's blooms begins.

### VARIETIES

With the choice of hundreds of beautiful varieties it becomes very difficult to advise any limited list as "best to plant". Therefore, it seems best to name a few of the more popular varieties that are obtainable at prices within the average person's means.

- Alice:** Brilliant pink.
- Britannia:** Crimson red.
- Cynthia:** Rose red.
- Eureka Maid:** Deep pink.
- Queen of May:** White with red specks.
- Goldsworth Yellow:** Apricot yellow.
- Pink Pearl:** Shell pink.
- Unknown Warrior:** Bright red.
- Purple Splendor:** Deep purple, dash amber.
- Doncaster:** Scarlet crimson.
- Mrs. G. W. Leak:** Pink with dark blotch.
- Mrs. de la Mare:** Lily white.
- Lord Roberts:** Dark red, black blotch.
- Christmas Cheer:** Blush pink, dwarf.
- Unique.** Lemon yellow.
- Pygmalion:** Scarlet crimson, black spot.
- Decorum:** Creamy white, fragrant.

Here, also is a list of some of the more outstanding varieties that are not as commonly known as those above: Earl of Athlone, Beauty of Littleworth, Loderi, King George, Mars, Butterfly, Mrs. Turnival, Mrs. E. C. Sterling, Dawns Delight, Luscombei, Josephine, Mother of Pearl, John Walker and Lady Primrose.

Space does not permit the listing of many other lovely varieties. However, there are shades and colors to fit every preference. Visit your nurseries in the spring and make your selections while the plants are in bloom. Or, better still, attend the early spring Rhododendron shows and see the many different varieties and types.

### COMPANION PLANTS

Nature's own companion is the Azalea, either deciduous or evergreen. They belong to the same family and require very much the same culture. However, most



Azaleas bloom during early spring so it is advisable to use several other companion plants in your grouping to have full summer color. Primroses make a nice showing as a low border in early spring, followed by perennial Phlox. Tall varieties of Phlox may be planted in among the Rhododendrons with dwarf varieties in front. This will give bright color to the bed from early July until fall. There are many varieties from which to make your selection. A wide range of color with many special variations.

Lilies make an especially fine permanent planting that will add a great deal of charm and beauty to your garden. There are all sorts of types and varieties that may be used, with various blooming periods to give color throughout the summer. This bulb deserves far more popularity than it has achieved. Too few gardeners are acquainted with the many possibilities of these lovely plants. If annual flowers are desired a combination of



of Petunias and Zinnias may be used to good advantage. A wide selection of colors in both make it possible to work out almost any color combination you may desire.

A great deal more could be written about Rhododendrons and their companion plants. However, space does not permit much detail.

As there is no substitute for experience, when it comes to gardening, it is hoped this brief article will create enough interest to get you started in the growing of these shrubs. After a year or so you will find the work so enjoyable you will be looking for more room in order to increase your plantings.

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RARE "ELEMENTIZED"

TO PRODUCE

## PRIZE ROSES

Packed in 5-lb., 25-lb., and 100-lb. Bags



## RHODODENDRON FERTILIZER

For Plants Requiring an Acid Soil

RARE "ELEMENTIZED" LAWN AND GARDEN

# FERTILIZER

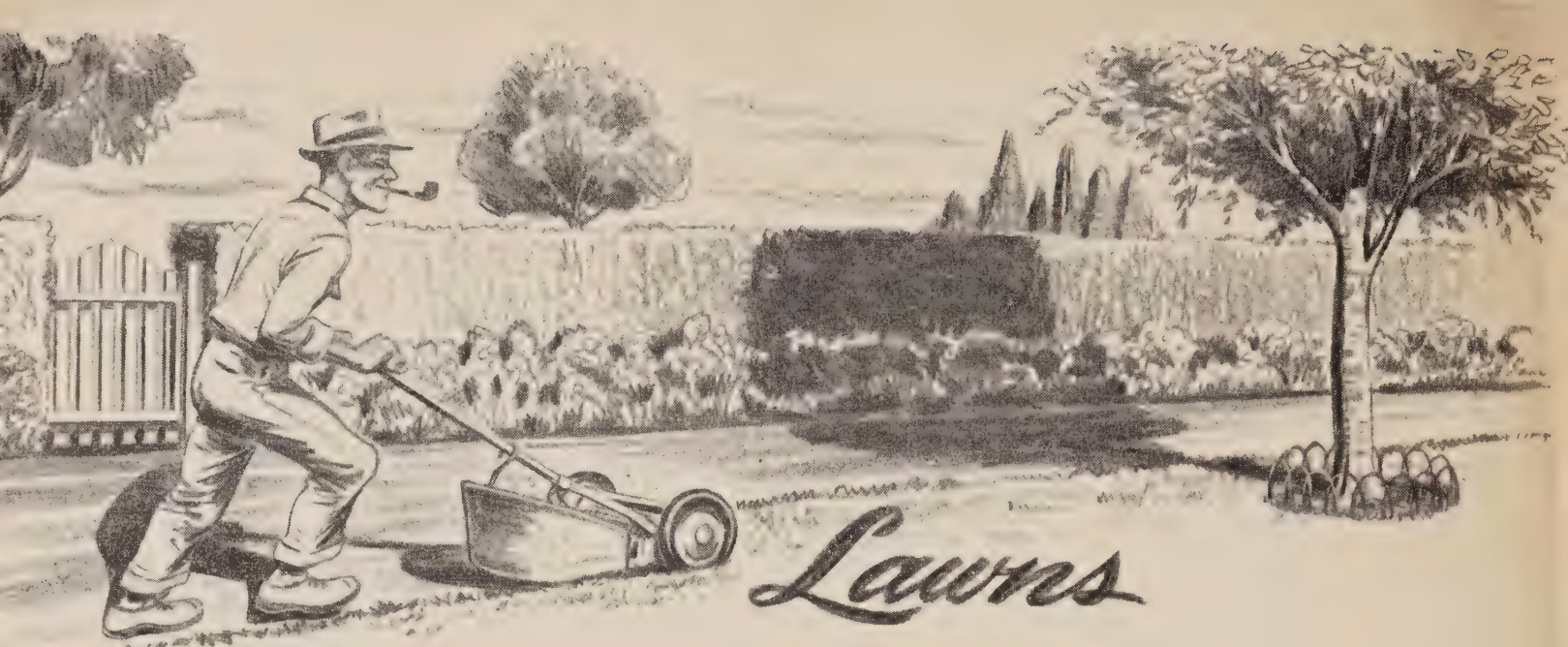
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CARSTENS PACKING COMPANY

TACOMA, WASHINGTON





Every Home Owner desires a lovely lawn with thick healthy turf. It is not a difficult task if thoroughness is the keynote in early preparation. There used to be a saying that a lawn had to be years old before it could be good. If anyone tells you that, just smile. You can have a perfect lawn in from six months to a year, thanks to Western lawn specialists, who have studied grasses and their reactions to soil and climatic conditions.

In planning and making a lawn, keep in mind that it is a longtime proposition, and that a good foundation is essential. Many times this calls for artificial drainage, grading, which is artistically effective, as well as practical from the point of view of upkeep. Or perhaps, you may be one of the fortunate individuals who has an ideal situation from which to begin.

First attention must be given to drainage. If it is naturally poor, the top soil should be removed, saved for future use, and the subsoil broken up.

We must stress the importance of removing the top soil and saving it before going to work on the subsoil drainage, as the top 4 to 6 inches of ground is always the best, and should be used as a base for the later development of the root system of your lawn.

If the subsoil is the heavy clay type, a generous application of coarse sand, or even fine gravel, will help greatly in correcting this condition. If compost material is available, by all means use generous quantities. On the other hand, a light sandy subsoil does not require a great deal of correction, unless it is the addition of humus material such as compost or peat moss.

Barnyard manures are not desirable in making a new lawn because they are likely to contain many weeds, which will continue to germinate over several years.

### PREPARING TOP SOIL

After the subsoil condition has been corrected, and the desired grade reached, the topsoil can be replaced. If the soil is poor, haul in enough good rich loam to cover the area to a depth of six inches. If your summer weather is hot and dry, and watering is a problem, add to this topsoil a generous quantity of peat moss, at the rate of one bale to 600 sq. feet.

Also, at this time, add a good complete commercial fertilizer, at the rate of 4 lbs. per 100 sq. feet. This will supply available nourishment for the new grass, as well as a supply of plant food later on. After preparing the topsoil, water to bring up weeds. In new locations, repeat this two or three times, hoeing down the weeds each time they come up. Just before sowing your seed, level and rake smoothly, and then roll.

### SEED SELECTION

The selection of seed is vitally important as good preparation will be of little benefit unless the proper mixture is selected for your particular locality. It is far better economy to spend a few extra pennies on a high quality seed, and have a satisfactory lawn for many years, than to sacrifice quality for a temporary saving. A mixture containing two or more "Base Grasses" and one "Nurse Grass" is the ideal combination for Northwest soil and climatic conditions. Keep away from mixtures containing filler grasses, such as English Rye Grass, Timothy, or Mesquite. These grasses develop into thick bunchy clumps, and will mar the beauty of even the best kept lawn.

**BASE GRASSES** are those which will live for many years, and will of themselves occupy the whole area on the existing type of soil if properly maintained. This class of grass is almost invariably slow to mature, but once it is established, it is there forever. The following grasses are classified in this group:

**Kentucky Blue Grass**, which produces a hardy turf of rich green plants, a flat type leaf, and a heavy root system that reacts very well to plant food.

**Chewings Fescue** produces a fine textured brilliant green dense turf. The leaf blades are particularly distinctive, being cylindrical in shape rather than flat. Chewings Fescue is deep rooted, rather tolerant of poor moisture conditions and hard usage, but, of course, its full beauty can be realized with adequate care. It is adapted to approximately the same conditions as Kentucky Blue Grass, but is superior in its adaptation to shaded conditions.

**Creeping Bent** is widely known for its exceptionally fine turf producing qualities. Its fine bladed leaves and thick root system makes an excellent turf if given proper care.

**Creeping Red Fescue** is very similar in appearance to Chewings Fescue, the only readily apparent differences being a darker green color, and a somewhat softer texture. It is rapidly becoming the most popular individual grass for Western lawns because of its turf and its ability to withstand fungus diseases which often attack Bent Grasses.

**NURSE GRASS.** Its life is short, but it plays an important part in grass seed mixtures. It grows fast and occupies the soil until the slower and more permanent varieties are far enough along to cover the ground. By its nature, Nurse Grass seldom lives over three years and should not compose over 30% of the entire mixture. The best known and widely used in this group is Red Top.

### WHEN TO PLANT

Here in the Northwest, lawns can be planted almost any time of the year if the soil and seed are kept moist throughout the early growing stages. However, the most desirable time is either during the spring season or early fall, as this presents cooler weather conditions, and moisture is more readily available. Whatever the season, loosen the soil with a steel rake to a depth of one inch just before sowing. Then divide the seed into two equal parts. Sow one part as you walk North and South, and the remainder as you walk East and West. This method assures a more even application of the seed, and helps greatly to eliminate bare patches. It is desirable to sow the seed on a calm day, as even a light wind can cause considerable trouble in securing even distribution with fine lawn seed. Covering the new seed with a thin layer of peat moss will speed up germination and give added protection against the ground drying.

### WATERING YOUR LAWN

After the area has been thoroughly seeded at the rate of 1 lb. to 150 sq. feet, roll the area with a medium weight roller, and then wet thoroughly with a fine spray,



being careful not to wash any of the soil. During the early stage of germination, the soil and seed should be kept moist at all times. This is best accomplished by watering lightly in the morning and in the evening. Care should be taken not to apply water when the sun is out full, as this may result in a burning action which would kill the germination of the seed. After the grass is well started, the watering should be more thorough and less frequent. Deep watering encourages the development of deep roots upon which the future success of a lawn largely depends. Shallow watering or sprinkling tends to bring the roots near the surface where they are quickly affected by severe heat. It is far better to water a lawn thoroughly once a week, than it is to make light daily applications.

## MOWING YOUR LAWN

In mowing a new lawn, set the blades to cut not less than 2 or 3 inches above the ground. As the turf becomes thick, it can be mowed closer, although the longer the grass can be left, consistent with good appearance, the better it is for the grass. Shortly clipped lawns dry out fast during hot summer months, and when this condition once starts, it is very hard to check. It is best to remove all grass clippings each time the lawn is mowed, storing these clippings in your compost pile. If this is not done, they will form a soggy mat at the soil surface, robbing the soil of nitrogen, and cause a sour condition which is not beneficial to growing plants.

## GENERAL CARE

To properly care for an established lawn, a few simple rules should be followed each growing season. Early in the spring, the turf should be well raked with a steel or moss rake to remove all leaves and other material accumulated during the winter. Then an application of a complete plant food at the rate of 4 lbs. to every 100 sq. feet should be made to afford the lawn plenty of food right from the start. This should be followed in about two months with the second application of fertilizer at the rate of 2 lbs. per 100 sq. feet. This same schedule should be followed throughout the hot summer months, if a perfect lawn is desired.

As dry weather comes, watering should be consistent and deep, as once a lawn is allowed to dry out, it is almost an impossibility to bring it back to a normal condition during any one season.

Much has been written and said about 2-4D Selective Weed Killers the past few years. This material is truly a boon to the home gardener, as it eliminates the hardest individual job in lawn care, and makes it possible for anyone to have a lovely, weed-free lawn with the least amount of effort.

2-4D Weed Killer has passed the experimental stage, and is definitely effective against most common weeds found in lawns. It does not leave an unsightly residue on the grass, nor is the material hazardous to pets. 2-4D gives best results when applied on warm, sunny days.

There is little response to the material if applied when the temperature is below 50°. In arid sections, with low humidity, sprays should be applied in the morning to avoid rapid evaporation, typical of afternoon applications. In most localities, this means that weeds are in the best condition for application of this material between May 1 and Sept. 15. Under ideal conditions, only one application is necessary to kill susceptible weeds permanently. However, a good weed eradication program requires follow-up sprays, for some plants may be missed, and some plants

may be so resistant as to require a second and third application. Then, too, weed seeds may germinate later and produce new weed plants.

This product is sold under several trade names, each container giving directions for the material. Care should be given at the time of application to prevent the spray from contacting flower plants and shrubbery, as its killing action will effect almost any broadleaved plant. Therefore, is as advisable to make application on a day with little or no wind.

**Amepco "Realite"**



**PLASTIC GARDEN HOSE**

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**CLEAR AMBER**, glistening and transparent, the finest garden hose available. 5 year warranty.  
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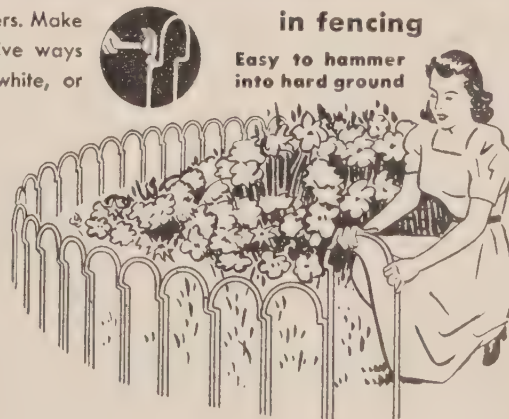
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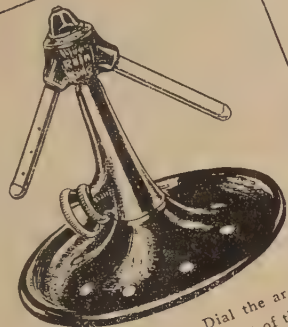




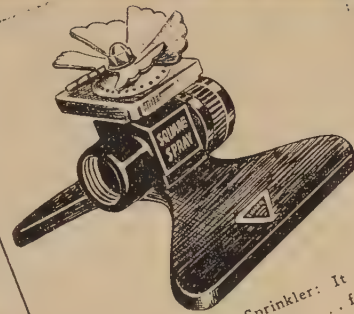




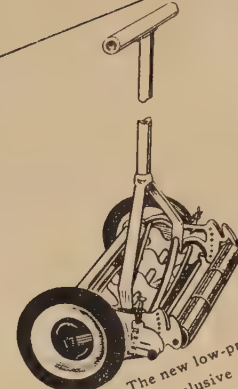
# GOOD TOOLS *turn* *Work into Play!*



**RAIN KING Model K:** Dial the area you wish to sprinkle. A simple twist of the knob on top of the sprinkler automatically sets the arms to cover from 5 to 50 feet. The most popular, quality sprinkler in America. \$7.50 each.



**PROEN SQUARE Sprinkler:** It actually sprinkles in an exact square . . . from 2 to 30 feet. It places "rain-like" drops of water into the corners but never on the walks or over the fence. Can be coupled into a series of two or more. \$3.95 each.



**CLEMSON 16:** The new low-priced quality mower with all the exclusive Clemson features. Simple adjustments for cutting heights and bed-knife. Handle suspension prevents any bobbing on bumpy ground. Compare with any mower . . . at any price. \$22.95.



**TURF EDGER:** Rolled from high carbon steel, giving it the strength of a "life-time" of service. Excellent for edging lawns along walks or flower beds. Made with a straight shank and 48 inch Ash handle. \$1.95.



**GRASS HOOK:** Makes easy work of a tough job. Durable, polished hardwood handle formed and shaped to fit the hand. The blade is finely ground with a full, wide and even bevel. 95c.



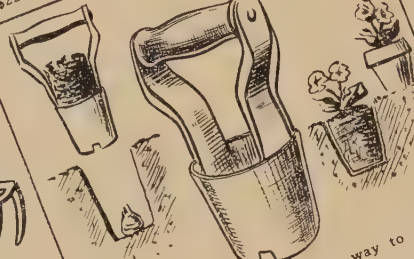
**WARREN HOE:** The ideal tool for cultivating flower and vegetable gardens during the growing season. Well balanced, light weight and sturdy construction. The special design makes weeding a simple job. \$1.90.



**WEEDER & CULTIVATOR:** Top quality hand tools especially designed for those who enjoy good gardening. These two special tools are perfect for weeding and cultivating around established flower and vegetable plants. \$1.40 each.



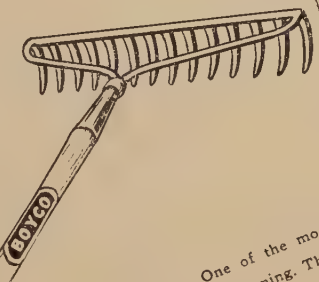
**GRASS WHIP:** This rugged tool is just the thing for extra heavy duty weed and grass cutting. Built for tough jobs. Tempered steel blade, whip shaft and form fitting hardwood handle. \$1.35 each.



**HOLE-IN-ONE:** The easy way to plant bulbs and small plants. The working part of the tool is sturdy steel with a form-fitting hardwood handle. Saves time and makes a perfect, round hole . . . at the proper depth you desire. 75c.



**BOYCO HOE:** Solid forged, high carbon shank type head. Well balanced to lighten the job of cultivation. Assorted sizes from small ladies' type to full seven inch blades. Priced from \$1.05.



**GARDEN RAKE:** One of the most important tools in good gardening. This rake is solid one-piece flat bow construction. Equipped with a 60-inch Ash handle. \$2.00.



**GREEN THUMB GLOVES:** A soft, comfortable, washable glove. Latex - Cream treated to protect and keep your hands soft and lovely. Sizes are Small, Medium and Large. 60c pair.



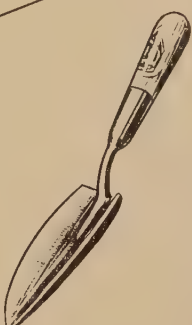
**OVAL SPRINKLING CAN:** Designed for easy carrying and pouring. One piece sweep handle. The sprinkling nozzle is made of polished brass crowns. Women prefer this oval pattern. From \$1.95.



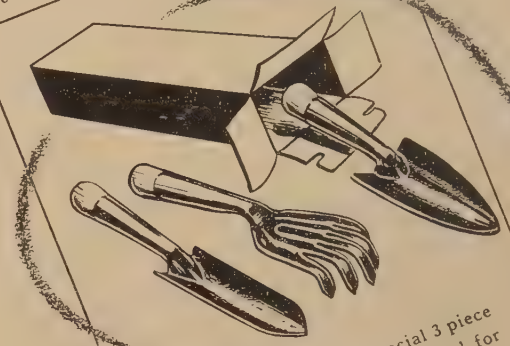
**No. 5600 — GRASS SHEAR:** The finest Wiss grass shear that makes easy work of a hard job. Cuts all types of grasses including tough, wiry types. Handles are properly contoured to prevent knuckle scraping. \$2.50.



**QUICK-TRIM GRASS SHEARS:** Easy up-and-down handle action. Rust-resistant, bright nickel plated hardened blades. Perfect cutting from heel to points of blade. \$1.55.



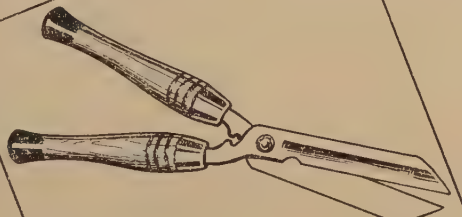
**FORGED STEEL TROWEL:** The professional type trowel that will give a lifetime of pleasant garden digging. Forged from high carbon steel with a full polished blade and hardwood handle. \$1.75.



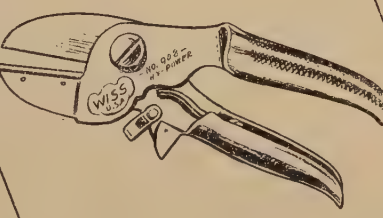
**3 PIECE SET:** This special 3 piece set of small hand tools is ideal for transplanting, cultivating and general maintenance work around the garden. The tools are formed from rust-resisting steel and attractively painted. Hardwood knobs on the handles prevent sore hands from excessive work. 50c per set. Be sure to take advantage of the special coupon in the lower corner.



**SPADING FORK:** Built for rugged jobs. Strong hardwood handle. The fork head is rolled from high carbon steel and tempered in oil. Available in either a long 48-inch handle or short D handle. \$2.90.



**WISS HEDGE SHEAR:** Drop-forged cutlery steel, hollow ground blades with notch and cutter for heavy branches. A low priced shear of excellent quality. \$2.75.



**HY-POWER PRUNING SHEAR:** Anvil type pruning shear, preferred because they cut clean with less effort and largely eliminate bruising. Superior construction throughout. \$2.75.

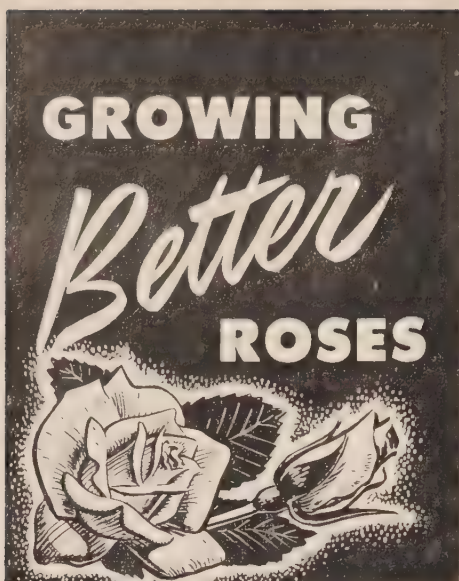
*This Coupon Worth*

**10c**

**WITH THE PURCHASE OF A 3-PIECE  
BOYCO TOOL SET NO. 4700**

**THIS COUPON EXPIRES MAY 31, 1950**





Every home garden should have a rose bed. There is no single plant that offers as much "all season" charm and beauty as does the rose. Producing blooms each month throughout the growing season, beginning with May or June and continuing on through October.

The grower must be prepared, however, to spray or dust his plants religiously every week or 10 days and to give the beds the special care they need. Roses are very susceptible to fungous diseases (mildew and black spot) and while control is simple, regularity is of the utmost importance.

### PLANTING

In areas that normally escape freezing winter weather, set out dormant plants during November and December. This enables the plant to take full advantage of the first early spring weather to establish itself in the new location. Where winters are more severe it is necessary to wait until early spring, as soon as the ground can be properly dug.

If your soil is just an ordinary good type that will raise garden vegetables, it will do very well for Roses. Roses like a mellow soil. If it is heavy in substance, dig in a layer of sand 1 or 2 inches thick. Peat moss should be added to either light or heavy soil.

The best fertilizer for preparing a new bed is well rotted cow manure . . . with the accent on "well-rotted". If this is not available, increase the quantity of peat moss and add a good complete commercial fertilizer at the rate of one pound per bush.

Rose plants thrive best where they can secure all the sunlight possible; hence, a shady location for planting should be avoided. The plants should not be close to trees or shrubbery. The proper distance to allow between plants is 18 inches.

First, dig a hole big enough to take the roots when spread out, and deep enough to allow a good base of well mixed soil with peat and bonemeal added. Heap the mixed soil in a pyramid shaped pile, placing the base of the bush at the point of the pyramid and spreading the roots in a natural way down the sides.

Fill in the hole about two-thirds of the way, being careful to set the bush just as you want it to grow. At this point, apply foot pressure, quickly but carefully around the covered roots. This firms the ground and assures the roots are properly set. Immediately after firming soil, apply water liberally. Let it drain away before filling the hole and never tamp or firm after watering.

### PRUNING

There are many theories on this subject. So many, in fact, that seldom do you find two "experts" that agree completely. Therefore, we will cover only the basic points.

In areas with severe winter weather it is advisable to prune heavily as soon as the bush becomes dormant. This will prevent much of the danger of winter kill.

Bushes treated in this manner should be mulched with peat or cow manure for protection against deep frosts.

In milder climates lighter pruning may be done in the fall or early spring. Spring pruning can be held off until the bush has actually started its new growth. When the new shoots are 1/2 inch or so long it is easier to decide which branches should be cut off. Sharp pruning tools are essential. This will avoid bruising the bark. The "snap-cut" types of shears in which the cutting blade comes down on a bed of soft metal are excellent under most conditions.

Severe pruning means that fewer shoots can develop and consequently fewer flowers are produced. These, however, are likely to be larger, with longer stems; hence, when the grower's objective is the production of blooms for exhibition purposes hard cutting back is often practiced.

On the other hand, when pruning is light more growth buds are left on the plant, more shoots develop, and in consequence more flowers. Therefore, this system is preferable when many Roses for garden display are desired.

### PEST CONTROL

Fortunately, there are several all-purpose Rose sprays and dusts on the market that take care of everything from mildew to aphids. For spraying there is Rix, a calcium polysulphide material that controls all of the plant diseases such as mildew and black spot. It should be applied at intervals of 10 days or two weeks starting as soon as the foliage is out and continued right on through until fall. A new "bug killer" called Isotox Garden Spray, which contains 5% Lindane, can be mixed with Rix and applied at the same time. This material controls aphids, leaf hoppers, beetles and other insects that commonly attack Roses. To receive the full benefits of a good spraying program it is important that a good applicator is used. Too often gardeners make the mistake of buying good materials and then not getting proper results because an ineffective applicator is used. One of the most effective applicators (and easiest to use) is the Sprayette. A sprayer you attach to the garden hose. Your garden supply dealer will show you this, and other efficient sprayers.

If you are a gardener who prefers dust to sprays there are several complete, multi-purpose dusts available. Ortho Rose Dust is specially formulated for the control of diseases and pests common with rose growing. Another complete dust for general garden use is Botano DeLuxe. Your local dealer can give you more complete information on pest problems.



### LOVELIER ROSES



Before setting out rose bushes, soak bare-rooted plants in Rosetone solution. Also water established plants with Rosetone. Plants take hold quickly and bear finer, earlier roses. Indispensable for the rose enthusiast.

1/2-ounce package, 25c  
3-ounce can, \$1





# Flowers...

## TO BEAUTIFY YOUR HOME

**AGERATUM** (Flossflower). An attractive herbaceous annual and one of the most popular summer flowering plants grown from seed. It is covered with blossoms from early summer until frost and is excellent for borders, edgings, or pots. Combines with Columbines, Pink Sweet Williams, French Marigold and Salpiglossis. Varieties: **Blue Perfection Medium**, grows 8 inches tall, compact plant bearing large vivid dark purple flowers, freely produced; **Midget Blue**, a very fine dwarf only 2 to 3 inches high. Growth is very uniform and even, the entire plant is practically smothered with small blue flowers; **Little Dorrit**, white, midget. **Packet, 10c.**

**ALYSSUM**. Annual and perennial, easily grown from seed in any good garden soil and especially suited in rockeries and edges in open sunny situations. The foliage tends to be grayish and the flowers are white, violet or yellow. Grows best in rich, light, well fertilized loam. Combines exceedingly well with Violets, Forget-me-nots, Gypsophila. Varieties: **Benthami Maritimum** (hA), Sweet white, honey scented, grows 1 foot tall; **Little Gem** (hA) grows 4 inches, the plants covered with snow-white blossoms; **Gold Dust** (Saxatile Compactum) (hP), a perennial yellow type, growing 1 foot tall; **Violet Queen** (hA), a beautiful, fragrant Sweet Alyssum of bright clear violet hue, holdings its colors throughout the hottest, driest summer. Considered best violet all-season edging plant. **Packet, 10c.**

**ANCHUSA** (Sea Buglose) (hP). A hardy, easy to grow perennial and biennial herbaceous plant, growing from 4 to 6 feet tall. Makes a good sized clump of rather coarse, usually hairy foliage, from which rise leafy stalks bearing from mid-July to September or later, loose masses of blue flowers. Plant in the perennial border, combining with Coreopsis, Gaillardia, Orange and Yellow Chrysanthemums. **Dropmore** variety. **Packet, 10c.**

**ANEMONE** (Wind Flower) (tP). Bright green, finely dissected leaves with large poppy-like flowers, 1½ inches across in various shades and mixtures of red, white and blue. Blooms from March to June. Sow seeds in warm fall or early spring. Thrives in rich, light garden loam. Keep moist during blooming period. Effective in beds combined with Scabiosa, Candy-tuft. **St. Brigid** variety. **Packet, 10c.**

**ARABIS** (Rock Cress). Perennial of 6 inches, but spreading out, forming a matty growth. Gray-green leaves forming a sort of rosette with white, fragrant, radish-like flowers borne in loose racemes. Blooms in early spring. Seeds sown in fall or early spring. Grows well in any soil. Attractive in the rock garden, in the regular flower border, or as a border plant. **Packet, 10c.**

**ASTERS** are among the most useful, decorative, late summer plants for the amateur gardener. They are easily grown, requiring only a normal amount of care for the abundance of flowers they will give in return. In warm sections seed can be sown directly in the garden after first frosts. Here in the Northwest they should be started in flats indoors and plants set out about the middle of May or thereabouts.

Asters prefer a rich soil rather than a sandy loam. They should be cultivated regularly and watered before the soil becomes too dry. Every plant must have plenty of space to develop fully without being crowded. The tall branching variety should be set about 15 to 18 inches apart each way and the medium growing sorts 10 to 12 inches apart, while the dwarf types can be as close as 8 to 10 inches. **Improved Crego Wilt-Resistant Aster.**

Beautiful, large colorful flowers 4 to 5 inches in diameter. Blooms are fully double, about 2½ inches thick, carried on long, strong stems. The individual petals are gracefully curled and twisted, giving the whole flower an artistic appearance not unlike a Japanese Chrysanthemum. Plants grow about 2½ feet tall and bloom from late August until the middle of October. Colors: **White, shell pink, deep rose, crimson, orchid, azure blue, purple, lavender and mixed.** **Packet, 10c.**

**Improved California Sunshine Aster.** The flowers are 4 to 5 inches across, are composed of a single row of loosely placed outer petals, which contrast with the unique yellow quill-like center disc. Stems are long and heavy, on plants 2 to 3 feet in height. **Mixed.** **Packet, 10c.**

**Super Giant El Monte Aster.** Deep glowing crimson blooms composed of daintily interlaced bloom-like petals somewhat similar in form to Giant California, but earlier and much larger. The huge flowers are borne on unusually heavy, non-lateral base-branching stems. **Packet, 10c.**

**Super Giant Los Angeles Aster.** Same type as the El Monte, however, the color is a pure shell pink blending to creamy pink in the center. **Packet, 10c.**

**BALLOON VINE** (Love-in-a-Puff) (hA). Excellent for covering wire fences or trellises, with support will grow to a height of 10 feet. The seed pods are inflated like balloons, and each black seed is marked with a white, heart-shaped spot. Quick growing vines are graceful with their deeply cut leaves and small white four-petaled flowers. Seed should be sown where the plants are to grow. Prefer a light soil and sheltered spot. **Packet, 10c.**

**BALSAM** (Lady Slipper) (hA). Requires a fertile but light, sandy soil. Grows 2½ feet. Its double blossoms, from white to red, purple or yellow, are borne close to the stems and overtopped by leafy shoots. Combined with Alyssum or Verbena, is best used as a border subject. **Packet, 10c.**

**BARTONIA** (Blazing Star) (hA). Its large, single, fragrant, 5-petaled, light yellow flowers with bristling stamens open late in the afternoon during July and August. The foliage, in contrast to the blossoms, which produce a metallic effect in the sunlight, is gray and downy. Grows 3 feet tall, flowers 3 to 4 inches across. **Packet, 10c.**

**BRACHYCOME** (Swan River Daisy) (hA). Grows 10 to 18 inches tall with branching stems, making an excellent plant for the rock garden or border, or for edging. Its deeply cut, lacy foliage, compact growth and free flowering quality make it a garden favorite. **Mixed colors.** **Packet, 10c.**

**BACHELOR'S BUTTON** (Corn Flower) (hA). This old-fashioned hardy annual is very easily grown from seed and is still a great favorite for cutting purposes. Sow the seed in either autumn or spring. Height, 2 to 3 feet. Hardy, rather thistle-like flowers, fine for cutting and border planting. Bloom from early summer until hard frost. Varieties: **Jubilee Gem**, splendid for edging, borders, or cutting. Tidy, compact plant, covered with double, rich blue blossoms. **Blue Boy**, excellent rich blue, tall with strong stems. **Double Rose**, same as Blue Boy except in color. **Double Mixed.** **Packet, 10c.**





CALENDULA, ORANGE SHAGGY



CALLIOPSIS, GOLDEN CROWN



CARNATION, MARGUERITE MIXED



COREOPSIS, DOUBLE SUNBURST

**CALENDULA** (Pot Marigold) (hA). This is one of the easiest annuals to grow; blooms from May to frost. Plants are from 1 to 2 feet high. Does well under average soil conditions, but responds to a moderately rich loam and in either full sun or semi-shade. Easily started from seed sown in the spring. Grouping—for bedding out; in front of shrubbery; for the mixed border combining with Delphinium, Shasta Daisy, Salvia or Alyssum. Varieties: **Orange Shaggy**, deep orange shading to lighter center. **Balls Orange**, bright orange shades. **Lemon Queen**. **Double Mixed**. **Packet, 10c.**

**CALLIOPSIS** (hA). Graceful for border plant, supplying throughout the summer an abundance of showy flowers of yellow, crimson and maroon. Growth from six inches to one foot. Seed sown in early spring to summer. Grows in any soil, but prefers a rich, light, well fertilized loam. Grouping—with Coreopsis, deep blue Delphinium, Snapdragons and Salvia. Varieties: **Golden Crown**, a rich orange-yellow with a pleasing fragrance. Nice for cuttings, with 12-inch wiry stems. **Drummond** (Golden Wave), yellow with circle of crimson-brown around the eye. **Tall Semi-Double Mixed**. **Packet, 10c.**

**CANARY BIRD VINE** (Tropaeolum) (hA). This vine bears curiously cut yellow flowers with curved green spurs, the entire blossoms vaguely resembling canary birds in flight. **Packet, 10c.**

**CANDYTUFT** (Iberis) (hA). Very showy, branching plant, growing 12 to 15 inches. Excellent for beds, masses, rock gardens and cut flowers. Blooming prolifically in spring, and during other seasons by successive sowing of seeds. Grows in ordinary soil, in sun and slight shade. Varieties: **Coronaria**, giant white hyacinth flowered. **Umbellata Type**, crimson, rose, white, lavender and mixed. **Packet, 10c.**

**CANTERBURY BELLS** (hB). The real bell flower. Branching plant heavily loaded with large pendant bells. Excellent for flower borders and rockery background. Grown in ordinary soil, fertilized with complete fertilizer. Does well in sun or light shade. Blooms May and June; growth 3 to 4 feet. Grouping with Scabiosa, Perennial Aster and Lupine. Seeds sown in July to produce flowering clumps next year. Varieties: **Calycanthemum** (Cup and Saucer), light blue, white, rose pink and mixed. **Packet, 10c.**

**CARNATION** (tP). Grows from 1 to 1½ feet. Easily winter killed, should be sown in flats during March. Transplant to other boxes when plants are 1 inch high, transfer to open soil when ground becomes warm. Carnations are best planted by themselves. Varieties: **Chabaud**, **Double Giant**—cardinal red, deep rose, flesh pink, white, mixed. (Annual) **Marguerite**, blooms four months from sowing, in mixed shades only. **Packet, 10c.**

**CARDINAL CLIMBER** (Lobelia cardinalis) (hA). Growth 2 to 4 feet. Erect, smooth, glistening plant with large, dark green lanceolate leaves. Racemose spikes of rather large, slender-tubular, intense cardinal flowers. Blooms July to September. Accent plant in rockery, near pools, in perennial border. **Packet, 10c.**

**CELOSIA CRISTATA** (Cockscomb) (hA). Erect plant, with large leaves, curious spikes of crested or plummy, brightly colored fascicles, the effect extending from July until late in the fall. Growth 9 to 18 inches. Requires a moist, rich soil and sun. Should be planted by themselves in beds, in flower borders, or in front of shrubs with dark green foliage. Sow seed in early spring. Varieties: **Cristata Tall**, **Crimson**. **Celosia Plumosa**, Fine Feathered Mixed. **Packet, 10c.**

**CHRYSANTHEMUM** (hA). Attractive long stemmed summer flowering plant, wide varieties of color. Sow seeds in flats and transplant when soil is warm, or sow seeds outdoors after all danger of frost has past. Plant in rich soil. Grows 18 to 24 inches in height. Blooms profusely throughout the summer months and into the late fall. Varieties: **Coronarium**, tall double mixed. **Carinatum**, single mixed. **Packet, 10c.**

**CLARKIA** (hA). Popularly known as the Rocky Mountain Garland because in form and color it resembles a garland of almond blossoms. Easily cultivated in sunny locations in any light garden soil. It produces graceful, showy blossoms delicately rose or purple. Excellent for mass planting. Plant with Larkspur, Pansies, Nicotiana or Virginia Stock. Varieties: **Scarlet Queen**, **Salmon Queen**, **White**, **Double Mixed**. **Packet, 10c.**

**COBAEA SCANDENS** (Cup and Saucer Vine) (hP). Evergreen shrubby climber, growing 10 to 20 feet. Rapid growing with pinnate leaves, solitary, light violet or greenish-purple, bell-shaped flowers blooming in April and May. Seed should be sown in early spring in moist earth. Good for covering porches, arbors, etc. **Packet, 10c.**

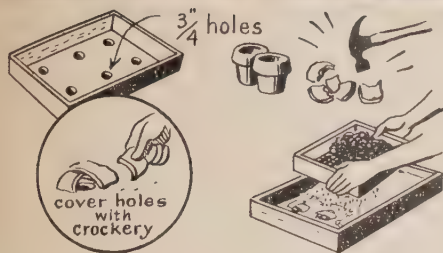
**COLEUS** (tP). Erect, branching plant, grown chiefly for the leaves which are furrowed serrate, or dentate, colored red, yellow, purple, bright green, frequently blotched or variegated; small blue or lilac flowers. Sun loving plant growing from 1 to 2 feet. Requires a rich, fibrous loam. Used in window boxes and as potted plants for sun porches, conservatories, etc. **Packet, 25c.**

**COLUMBINE** (Aquilegia) (hP). Erect, branching plant, with long, slender stems. The sepals as well as the petals are colored, and each of the latter has a downward extension which forms a hollow spur. Should be given only partial sun and protection from wind. Tolerates different soils but prefers rich humus to which bonemeal has been added. Seed sown in spring or early summer will give plants which can be set into their permanent quarters in September. Following spring will bloom abundantly, growing from 1 to 3 feet high. Splendid for the mixed border. Group with Delphinium, Scabiosa, Stocks, Snapdragons, Heuchera. Varieties: **Mrs. Scott Elliott**, long spurred, packet, 25c; **Pink Shades**, packet, 25c; **Blue Shades**, packet, 25c; **Long Spurred Mixed**, packet, 25c.

**COREOPSIS** (Grandiflora) (hP). Spreading plant, with long, smooth, dark green lanceolate leaves; large, daisy-like flowers, blooming April to frost. Drought resistant; grows in any soil, but best in



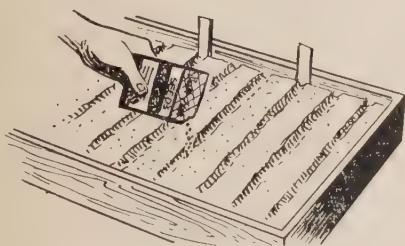
# Starting Seeds



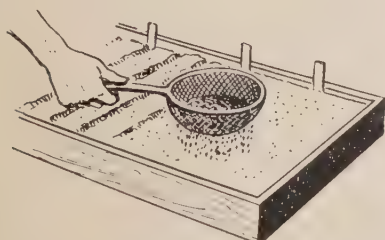
1. It's fun to start your garden from seed. Many varieties require indoor planting before the soil is warm enough for safe seed growing outdoors. Place a layer of drainage material such as broken flower pots in the bottom of the flat. Fill all but the top 2 inches with good loam. Spread an inch of Terra-Lite on top.



2. Use a straight edge stick and make shallow drills about 2" apart. If the seed to be sown is coarse, the drills can be quite deep (approx. 1/4 inch). Sow fine seed right on top of Terra-Lite.



3. Be careful in sowing seed . . . not to get it too thick. Very fine types, such as Petunias, should be mixed with dry sand. Many fine seeds can be easily damaged if bruised or handled too much. Don't forget to label flats at time of sowing.



4. Larger seeds should be covered with good loam or Terra-Lite. A good rule for depth of coverage is the same thickness as the seed. Don't attempt to cover very fine seed. Don't water too often. When plants are up an inch water with a solution of Bio-Gro Liquid Fertilizer.

moderately fertilized, light loam; requires a sunny location. Growth 18 to 24 inches. For the perennial and mixed borders, combining with Delphinium, Blue Scabiosa, Blue Larkspur, Gaillardia. Varieties: **Double Sunburst**, large, golden yellow, fully double. **Lanceolata**, golden yellow, semi-double. **Packet, 10c.**

**COSMOS (hA)**. Erect, branched, smooth plant, with finely dissected leaves; medium to large single and double flowers, ranging in color from white to rosy-lilac. Reaches a height from 3 to 10 feet. Thrives in average soil, but prefers a light, rather poor texture, and flourishes in either sun or partial shade. Seed sown in the open ground in April should bloom in July, and will furnish an abundance of cut blooms during the early flower season. Plant between shrubs; in the background of the mixed border, combine with Shasta Daisy, Lavender, Michaelmas Daisy. Varieties: **Klondyke Orange Flare**, deep orange, blooms early. **Early Double Crested** (anemone flowered), mixed. **Early Flowering Mammoth**, light pink, crimson, mixed. **Packet, 10c.**

**CUT FLOWER MIXTURE**. A mixture of easy growing annuals. Assorted colors. **Packet, 10c.**

**DAHLIA (hhP)**. It is easy and fascinating to grow Dahlias from seed and enjoy the surprise of new colors and forms. If seed is started early, plants will bloom the same season. Sow seed in shallow box in March, transplant carefully, and keep soil moderately moist. When all danger from frost is over, plant in the garden. Growth 2 to 6 feet. Require rich, moist, fairly light loam. Appear to best advantage when planted in large beds by themselves, or when planted in the foreground of shrub borders. Varieties: **Single Mixed, Double Mixed, Coltness Mignon** (Mixed Bedding). **Packet, 10c.**

**DAISY — African Blue Daisy (Arctotis) (hA)**. Branching plant, with thick, gray-green wooly leaves; wide, daisy-like, white-lilac-blue narrow-petaled flowers. Growth 2 to 3 feet. Blooms from June to December. A sun loving plant. Does best in rich, light, well fertilized garden loam. Important in the mixed border, combining with Snapdragons, Stocks, Larkspur, Godetia, Heuchera. **Packet, 10c.**

**Double Daisy (Bellis Perennis) (English Daisy) (hP)**. Blooming from February to May. Height 3 to 6 inches. Fleshy root, making large clumps of fleshy dark-green leaves, with large, densely rayed heads of white, rose, pink or reddish flowers. Sow seeds in early spring, to give strong plants to set out in October. Used as border plant, naturalized in wild garden and lawns; flower borders. Combine with Narcissus, Winter-blooming Stocks, Heuchera. **Mixed. Packet, 25c.**

**Shasta Daisy (hP)**. This popular flower is noted for its keeping qualities as a cut flower. Should be planted in the fall or early spring. Grows in any moderately rich soil in the sun or partial shade. Has smooth, dark green, lanceolate leaves with large, daisy-like pure white, golden centered flowers. Blooms April to September. Height 1 to 2 feet. **Packet, 10c.**

**DELPHINIUM (Perennial Larkspur) (hP)**. One of the finest garden flowers, even casually grown, are extremely hardy and make satisfactory garden plants, but if given a little special care, they reward the grower many times over. Fine plants depend upon sun, circulation of air, and a rich, light alkaline soil. Plants should stand at least 2 feet apart. Growth from 3 to 8 feet high. Seed of hybrids sown in late summer to produce good clumps in fall; seed sown in spring to produce summer-blooming plants. Combined with Columbine, Salpiglossis, Snapdragons, Stock, Scabiosa, Gladiolus. Varieties: **Pacific Giants Dark Blue Shades, Light Blue Shades, White, Mixed. Packet, 25c.**

**DIGITALIS (Foxglove) (hP)**. Their long spikes or stems, 3 or more feet high, are crowded with large thimble-like flowers all drooping toward one side and beautifully spotted on outer or inner surface. Easy to grow in the garden, so long as they have some shade. Will thrive in any ordinary soil. Seeds sown preferably in summer for flowers the next year. Harbors sow bugs and snails—work Naphthalene in soil around plants. In the perennial border, alone or grouped with Hollyhock, Canterbury Bells, Shasta Daisy; Begonia, Evening Primrose. Varieties: **Mixed. Packet, 10c.**

**EVENING PRIMROSE (Biennial)**. Opens suddenly with a quick nervous motion that can be seen and heard, exposing yellow corollas that attract night-flying moths. Among the best of the evening garden flowers and are excellent for mixed beds, rockery, and borders. Grow in branching form from 1 to 3 feet tall, producing large blossoms continuously. **Packet, 10c.**

**EUPHORBIA VARIEGATED (Snow on the Mountain) (hA)**. Growth 2 to 3 feet bearing an abundance of beautiful green foliage, broadly marked with silvery-white and bearing small flowers. Very attractive and ornamental and can be planted as background for lower growing plants or in the mixed borders. Sow seeds outdoors after frost is over in place where plants are to stand. Sunny exposure is best. **Packet, 10c.**

**FORGET-ME-NOT (Myosotis) (hB)**. Will bloom the first year from seed. Small blue star-like flowers borne in clusters on long stems. Their height ranges from 6 to 12 inches, depending on soil and climatic conditions. Form an excellent border with Tulips and other spring blooming bulbs. Adapted to all ordinary soils, but favor rich, moist, light, moderately fertilized soils. **Blue. Packet, 10c.**

**FOUR O'CLOCK (Marvel of Peru) (hA)**. Does not open its flowers until about 4 o'clock except on dull, cloudy days. Well branched plant about 3 feet tall with bright foliage and fragrant long-tubed blossoms of white, red, yellow. Blooms from July to frost. Excellent for planting in front of porch or fences. Will reseed themselves. **Tall Mixed. Packet, 10c.**





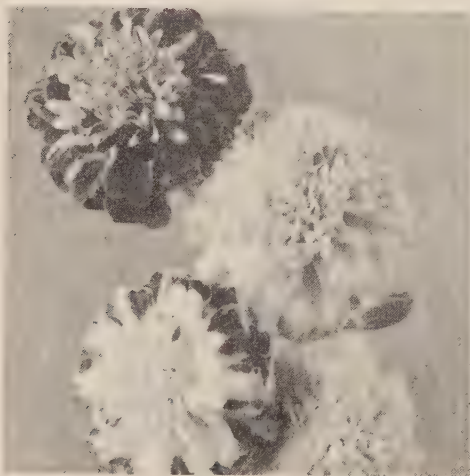
DOUBLE GAILLARDIA



LANTANA



LOBELIAS



MARIGOLD, HARMONY HYBRIDS

**GAILLARDIA** (Blanket Flower) (hP). Beautiful show plant, remarkable for the profusion, size and brilliancy of its flowers. Continuous blooms from early summer until late in the fall. Grows best in sun, but endures slight shade. Height 1 to 2 feet. Bears large, showy, solitary heads with yellow or reddish rays and purple disks. Flowers on long stems, which makes them ideal for bouquets. Plant in mixed border, combining with Deep-blue Delphinium, Russet Snapdragons, Yellow Geum. Varieties: (Perennials) **Dazzler**, maroon red, golden yellow; Single Mixed (Annuals) **Lorenziana**, Double Mixed, Single Mixed. **Packet, 10c.**

**GERANIUM** (Pelargonium) (P). This well-known half hardy perennial will bloom the first year from seed if sown early. Grown in pots and when weather is suitable, insert in soil. Subject to frost injury, so remove and give shelter during cold weather. Grow in sun and partial shade. Varieties: **Zonale Mixed.**

**Packet, 25c.**

**GERBERA** (Transvaal Daisy) (tP). Large daisy-like blossoms with flower stems rising to a height of about 2 feet. Flowers are excellent for cutting; stand well above a rosette of gray-green leaves and are solid colored in many pastel shades from pale amber through salmon and rose to rich ruby red. Raising plants from seed is not difficult, except that germination is uncertain and careful handling is necessary; for this reason propagation is generally done by cuttings. Best to group Gerbera by themselves in beds or flower borders, but can be combined with Ageratum, Blue Lace Flower and certain colors of Snapdragons. **Mixed colors.**


**Packet, 25c.**

**GEUM** (hP). 1 to 2 feet tall. Best in sun, but tolerates some shade. Hardy plants, with rosette formation of large, rough strawberry-like leaves; long flower stalks, bearing double rose-like flowers. Sow seed in early fall or early spring. Produces blooming plants in one year. Grows well in moist light soils; attacked by soil pests, use Naphthalene Flakes in soil. Groupings—looks well with Tall Lobelia, Michaelmas Daisy and Salvia. Varieties: **Mrs. Bradshaw**, blooms all summer, bearing fully double, brilliant orange-scarlet flowers. **Lady Stratheden** is a double yellow.

**Packet, 10c.**

**GODETIA** (Satin Flower) (hA). Grows from 1 to 2 feet tall in sunny or slightly shady places. Erect, slender branching plant; bright green, lanceolate leaves; large, expanded, single and double satiny flowers, white, crimson, pink, mauve, to purple. Seed should be sown in flats, transplanted when soil is warm. Grows in rather poor, sandy soil. Grouping—generally looks best alone, can be combined with Clarkia, Larkspur, certain Snapdragons and Stocks. Varieties: **Tall Double Azalea Flowered Mixed.**

**Packet, 10c.**



**TWIST-EMS**

Strong, dark green "invisible" tapes with wire reinforcing — speedily and permanently support annuals, perennials, vines, shrubs, and vegetables.

Box of 200, 4-inch size, 25c;  
Box of 100, 8-inch size, 25c;  
Box of 100, 16-inch size, 50c.

**NEW! 15c Pkg., 50 of 8-inch size; 10c Pkg., 35 of 8-inch size.**

**GYPHOPHILA** (Baby Breath) (hA). These light airy plants have a hair-like foliage and produce a very lovely effect in the garden. Excellent with bouquets. Sow seed outdoors in early spring, repeat sowings for longer season of blooms. Thrive in most moderately rich soil. Does well in rockeries. Varieties: **Grandiflora Alba**, true white. **Grandiflora Rosea**, pink. **Paniculata Alba** (Perennial), single white.

**Packet, 10c.**

**HELICHRYSUM** (Everlasting Strawflower) (hA). Flowers of papery quality which are extensively used for permanent winter bouquets because when they are dried they retain their form and color. Easily grown in a sunny spot in ordinary soil. **Mixed.**

**Packet, 10c.**

**HELIOTROPE** (hhA). Well known and much admired as border and bedding plant and also can be trained for a climber, growing from 1 to 6 feet high. Flowers borne in trusses and are very fragrant, blooming beautiful shades of lilac and lavender. Blooms profusely in summer. Prefers a rich, light loam. **Packet, 10c.**

**HOLLYHOCK** (Althaea) (hP). Grows 6 to 12 feet in sun or partial shade. Erect plants, with spire-like, simple, hairy stems; large, rough, heart-shaped leaves; large, regular, round blossoms of various bright colors. Grows in any soil; enrich with sheep manure. Subject to rust; control rust with Greenol copper spray. Appropriate along walls, lattice fences, boundary lines, interspersed among shrubs. Varieties: **Double, maroon, rose pink, scarlet, yellow and mixed. Single mixed.**

**Packet, 10c.**

**HYACINTH BEAN** (Dolichos Lablab) (hhA). A splendid, rapid growing climber, attains a growth of 12 to 20 feet. Bears clusters of hyacinth-like flowers in great profusion, followed by beautiful ornamental seed pods. **Mixed. Packet, 10c.**

**HEUCHERA** (Coral Bells) (hP). Blooming from June to September, they are valuable for the low border or rockery, growth 12 to 18 inches. In a good loamy soil and sunny location, the plants produce mats of deep green, from which rise slender stalks bearing airy clusters of bell-shaped flowers.

**Packet, 15c.**

**KOCHIA CHILDSII** (Mexican Fire Bush) (hA). A fast-growing, shrub-like ornamental. The small but dense foliage, which is a clear bright green in spring, and a somewhat deeper shade all summer, turns bronze-red after frost. The plants grow from 1 1/2 to 4 feet tall and are compactly pyramidal or rounded. They are of easy culture in moderately rich soil. Their formal shape and uniform size adapt them for use as a temporary hedge or tall border for walks or drives.

**Packet, 10c.**

**LANTANA** (hA). Low, compact, full flowered varieties whose flowers, in flattish clusters, vary or change from brilliant yellow through orange to red. Widely grown as a greenhouse subject, being easily raised from either seed or cuttings, it is excellent as a summer bedding plant, blooming continuously until nipped by the frost in the fall.

**Packet, 10c.**



## New SUPREME LARKSPUR

*The ideal cut flower strain for home gardens*

Yes, an entirely new strain of the popular Giant Imperial or base branching type Larkspur . . . offering five entirely new colors and a white. These colors are not just a slight variation from existing varieties, but are new tones, being absolutely distinct and different.

The plants have an ideal, upright habit, with a tremendous central or main flower spike which is formed by a great many fully double, large flowers with broad petals. The plants are exceptionally uniform in height, making them ideal for mass plantings in annual borders.

**SUPREME MIXTURE.** A mixture of Dark Blue, Lilac, Pink, Rose, Salmon and Bone White in the right proportions. We believe there is no other Larkspur mixture that will come even close in beauty and quality. A brand new introduction that is excellent for garden charm as well as home beauty in striking flower arrangements. **Pkt. 25c.**

**LARKSPUR** (hA). Grows from 3 to 4 feet in sun and light shade. Erect, bushy plants, with light green, finely dissected leaves. For earlier blooms, plant in flats and transplant. Prefers a rich, well fertilized soil. Use a complete plant food. Varieties: **Giant Imperial Blue, White, Lavender, Rose, Carmine, Mixed.** **Packet, 10c.**

**LINARIA** (Miniature Snapdragon) (A). Flower resembles miniature Snapdragon and in addition has a long Columbine-like spur. Blooms in about eight weeks after sowing. Height 12 to 18 inches. Flowers come in a wide variety of pastel shades. Blooms profusely and continuously until frost. **Mixed. Packet, 10c.**

**LINUM** (Flowering Flax) (hAGP). Growth 1 to 2 feet. Sun and light shade. Erect, branching freely, with slender branches and flower stems; numerous broadly lanceolate to oblong, sessile, smooth and shining leaves; terminal, salver-shaped flowers blooming in summer until frost. Easy to grow from seeds sown in early spring. For the mixed border combining with Larkspur, Verbena, Heuchera and Ageratum. Varieties: **Annual Scarlet; Perennial Blue.** **Packet, 10c.**

**LOBELIA** (hA). Grows 6 to 12 inches in sun or light shade. Trailing, or compact, bushy plants; variable, dark green, bronzed, or light green leaves. Irregular, small tubular flowers, borne on slender pedicels, varying from light to dark blue. Excellent for border, rock work and hanging baskets. For best results sow thinly in flats, covering with glass until seedlings are through soil. Transplant into a moist, well fertilized bed. Grouping—Gold Tuft, Iceland opsy, Coreopsis, Siberian Wallflower and Pot Marigold. Varieties: **Crystal Palace**, compact form with deep blue flowers. **Sapphire**, sapphire blue, white eye, trailing. **Packet, 10c.**

**LUPIN** (Russell Lupin) (P). Distinguished by their deeply cut foliage, which has many lance-like rays radiating from the end of the leaf stalk. The flowers, shaped like those of peas, are borne in great profusion on long-stemmed spikes. The flowers, predominantly blue, yellow, white or rose, are usually borne in May and June. After the first bloom is over, if the plants are cut back, they will often produce a second showing of flowers. Grows about 3 feet tall, thriving in either sun or partial shade. **Mixed. Packet, 25c.**

**MARIGOLDS** are truly the amateur gardener's best friend. They are both hardy and colorful, which makes them ideal for all types of garden work. Blooms start early in July and continue until late fall. They are free from or withstand disease better than most other annuals. These showy annuals may be raised by sowing seed in the open garden as soon as the soil is warm, but a more certain method of procuring fine plants is to sow the seed in flats or hot beds about the first of March.

**Tall African Double.** An especially fine tall (3 feet) branching, bearing enormous flowers of the quilled type. **Orange, Lemon and Mixed. Packet, 10c.**

**Harmony French Dwarf Double.** The neat, dwarf, compact growth, combined with the extremely early, free flowering character of the plants makes this new dwarf Harmony Hybrid one of the outstanding introductions of the season. Flowers are medium size, rather large for the French type, averaging 1 3/4 inches in diameter and do not have the strong Marigold odor. The color range includes the popular yellow and innumerable blotches and striped combinations of golden orange and maroon, and various shades of golden and lemon yellow with the contrasting dark maroon. Plants reach a height of 12 to 14 inches. **Packet, 10c.**

**Sunset Giant.** The very largest Marigold yet developed, blooms reach a size of 5 inches in diameter. The definite sweet scent of the flowers adds to its value as a cut flower, as well as being a good garden plant. The plants are extremely robust, producing a heavy growth of foliage, with 6 to 8 heavy branches each bearing 3 to 6 flowers. The plant grows from 3 1/2 to 4 feet. **Packet, 10c.**

**Signata Pumila Little Giant** is the smallest Marigold yet developed, growing but 9 inches tall. These dainty plants make an excellent border as their brilliant golden yellow flowers bloom profusely throughout the entire summer up until late fall. **Packet, 10c.**

**Dwarf French Double Scarlet Glow.** Mahogany turning to orange scarlet. **Packet, 10c.**

**MIGNONETTE** (Reseda) (hA). Adaptable and growing in either full sun or partial shade; thrives best in cool moderately rich soil. From 6 to 15 inches high. Its vigorous branches spread gracefully and are well clothed with rather heavy, dark green leaves. Plants should be started from seed in the open ground, for they grow quickly and dislike transplanting.

Blooming period is from June to frost. Blooms are exceedingly fragrant. For the annual and perennial borders, combining freely with most flowers. Varieties: **Odo-rata Grandiflora**, white. **Victoria Perfecta**, brilliant red. **Packet, 10c.**

**MORNING GLORY** (hA). Their large, dark green, heart-shaped leaves make an excellent screen and the trumpet-shaped flowers are borne in great profusion all summer. Rapidly growing in almost any moderately rich soil. Seed should be sown after danger from frost is past. Germination is hastened by filing small holes or notches through the horny coat. Varieties: **Heavenly Blue**, sky blue shading to white in throat. **Scarlett O'Hara**, flowers earlier and is able to climb without assistance; stunning 3 1/2-inch flowers of a soft velvety scarlet. Foliage is distinct and the flowers stay open longer. **Packet, 10c.**

**NASTURTIUM** (hA). Includes climbing and dwarf herbs with showy red, orange or yellow, funnel-shaped flowers consisting of 5 separate petals, the sepals produced into a long spur containing nectar. Has fleshy stems, shield-shaped leaves and bright blossoms which are produced continuously throughout the summer. Seed is sown in the open in the spring. Plants will bloom most prolifically in given a rather poor soil in a north exposure.

**Glorious Gleam.** Color range: salmon, golden yellow, orange scarlet, cerise, cream, orange, maroon and crimson shades, as well as many spotted varieties. **Packet, 10c; ounce, 50c.**

MORE NASTURTIUMS NEXT PAGE



**BIO-GRO**, the marvelous new Liquid Fertilizer, is a vastly superior Organic growth promoter, and a plant food that is nutritionally complete. For lawns, flowers or vegetables . . . and concentrated for economy. A liquid fish fertilizer that leaves no offensive odor.

1/2 pint's . . . . .	\$ .50
1 pint . . . . .	.85
1 quart . . . . .	1.35
1 gallon . . . . .	2.75



**Golden Gleam** Nasturtiums are semi-dwarf, bearing sweet-scented golden yellow flowers on stems well above the bright green foliage. **Packet, 10c; ounce, 50c.**  
**Scarlet Gleam** Nasturtiums are semi-dwarf, bearing the flowers well above the bright green foliage on long, wiry stems. Fiery orange-scarlet flowers that are fully double, very large, sweet scented.

**Packet, 10c; ounce, 50c.**

**Mixed.** For those who still prefer the good old fashioned type, we offer the **Dwarf Mixed** and the climbing or **Tall Mixed.** **Packet, 10c; ounce, 35c.**

**NIGELLA** (Love-in-the-Mist) (hA). Grows to 1½ feet and has pale blue or white flowers surrounded and partially concealed by the finely cut green leaves. The flowers, which last well when cut, are most attractive in mixed bouquets. Seed can be sown in the spring as early as the ground can be worked.

**Packet, 10c.**

**NEMESIA** (hA). Growth 8 to 12 inches. Has bright yellow, orange and red blossoms, resembling those of snapdragons in miniature. Seed may be planted in flats in March and set out the end of May for early blooms, or may be sown outdoors after danger of frost has passed. They should be set close so that the frail stems may support one another. Very effective in window boxes. Grows best in rich, well fertilized, light garden loam. Can be grouped with Clarkia, Salpiglossis, Snapdragons. **Mixed.** **Packet, 10c.**

**NEMOPHILA** (hA). Grows 6 inches high. If seeds are sown early in spring in a semi-shaded spot in the border, or on the edge of the wild garden, the small bright flowers will appear continuously all summer. Has wide-open or broadly bell-shaped blossoms held on short stems above prettily cut leaves. Seed may be sown from October to March. **Blue.**

**Packet, 10c.**

**NICOTIANA** (Flowering Tobacco) (hA). These stately plants are very fine for background in an annual bed. Produces large, trumpet-shaped blooms until frost. Sow seed March-June in rich moist light loam. Grows from 3 to 5 feet. **Crimson, White, Mixed.**

**Packet, 10c.**

**PANSY** (Viola Tricolor) (hA). Has long been grown in beds and borders because of its ease of culture and the wonderful diversity in color and markings. They do well in any good light soil, but prefer a sandy, loamy deep planting where they will not be overshadowed by trees or too much exposed to hot dry sun. Planting is best performed in spring or early autumn; it is advisable to sow in June for transplanting in autumn and in late August for the early spring transplants. Sow seed in light soil, cover slightly, and transplant to boxes as soon as large enough. Low growing and blooming from March into fall. Used in mass plantings in the flower border in combination with Alyssum saxatile, Columbine, Yellow Snapdragons, Stocks and Marigolds. Varieties: **Cornflower Blue, Golden Queen, pure yellow, King of the Blacks, Packet, 25c. Swiss Jumbo Mixed, Packet, 25c. Oregon Giant Mixed.**

**Packet, 10c.**

**PENTSTEMON** (Beardtongue) (tP). Grows 2 to 4 feet, thriving best in open situations in soil well drained but not too dry. Fast growing, bushy plant, branching from the base, medium-sized, bright green, shiny leaves. Rather large, long tubular flowers of red, pink, coral and lavender. Blooming April to September. Sow seeds in early spring. Combine with Clarkia, Delphinium, Pyrethrum, Shasta daisy, Verbena. **Packet, 10c.**

**PETUNIA** (A). Very showy and popular plants, effective in beds, borders, porch boxes and pots. They thrive in a mixture of 2 parts of loamy soil and 1 part of leaf mold and require plenty of water during summer. The seeds, which are minute, should be sown in March in light, finely sifted soil, very lightly covered and given gentle heat. When large enough, pot singly, and pinch back the points before they get too high, to induce compact growth. For planting out, these potted plants should be gradually hardened off earl in May.

**Martha Washington** ushers in an entirely new version. The plants are about 9 inches tall. Frilled portion of flower is about 3 inches in diameter. It is a beautiful blush pink and center portion is strongly veined a rich wine red, deepening in the throat to dark violet. It comes exceedingly true to color and type. **Packet, 25c.**

**Miniature Petunias Rose Gem and Pink Gem.** These two charming types have filled a vacancy home gardeners have had for years. Where a low, solid bed of color is needed nothing does quite as well as these two varieties of miniature petunias. The plants are neat and compact, 5 to 6 inches in height and smothered with richly colored blossoms about 2 inches in diameter. **Rose Gem; Pink Gem. Packet, 25c.**

**Dwarf Giant of California** are the largest of the single flowering petunias. The flowers of crimson, white, lavender, violet and pink, are completely ruffled with large, graceful throats. Excellent in beds by themselves or grouped with Dwarf Lobelia. **Mixed. Packet, 35c.**

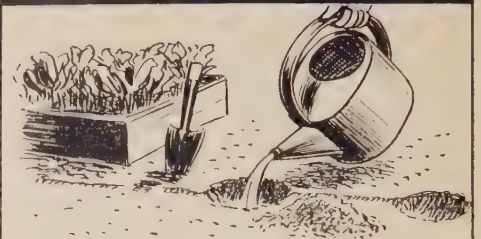
**Bedding Petunias:** Varieties: **Balcony Blue, Balcony White, Balcony Red, Rosy Morn, Single Mixed. Packet, 10c.**

**Elks Pride Dwarf.** Deep Purple. **Packet, 25c.**

**PHLOX DRUMMONDI** (hA). One of the most beautiful and easiest grown of our hardy garden annuals. The flowers are produced in large trusses. Grows 8 to 10 inches. Requires a sunny position. Bushy, branching plant with linear-lanceolate, bright green leaves. Sow seed in March in a rich, moist, well fertilized, light loam for best blooms. Blooms from July to October. Used as a cover plant in rose beds, in the foreground of the shrub border, in large mass plantings in the flower border, or combined with Verbenas, Petunias, Gypsophila, Snapdragons. Varieties: **Rose, Scarlet, Salmon, Crimson, Mixed. Packet, 10c.**

**PHYSALLIS** (Chinese Lantern). Growing to 2 feet, bears small white flowers followed by large brilliant red calyxes becoming 2 inches long when the plant is in fruit. It is a perennial and forms long

# Transplanting



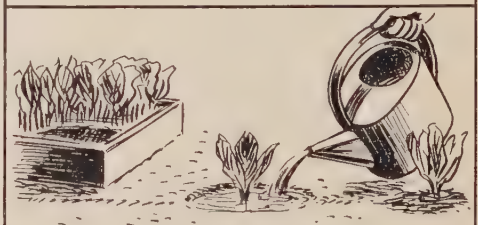
1. Cultivate the area well before setting out plants. Arrange the planting with small stick before digging the holes and allow plenty of room for the plant's growth. Water the hole thoroughly with a solution of Transplantone and then set the plant.



2. When removing plants from flats and setting them into the prepared bed care should be given in not disturbing the roots any more than necessary. This sets the plant back and sometimes requires several weeks before growth is resumed.



3. When the plant has been placed in the prepared hole scoop dirt around the base and firm it down well. Apply pressure steadily so as not to disturb the soil already around the roots.



4. Water should be used generously when setting out plants. Adding a teaspoon full of Transplantone, a hormone material, to each gallon of water will help greatly in preventing root shock and stimulate early season growth. Bio-Gro Liquid fertilizer should be used several times for healthy plant growth.



tuberous roots which are not killed by frost and spread all over flower beds. The bright red "lanterns" are valued for winter bouquets, but the plants should be grown only on waste spots where their aggressive attempts to occupy the earth will not become objectionable. **Francheti.**

**Packet, 10c.**

**PINKS** (*Dianthus*) (A). Grows from 10 to 14 inches high, and bears beautifully colored single and double blossoms in profusion all summer. Blooms are very sweet smelling. For best results seed should be sown in flats and transplanted when soil is warm. Requires a rich, light, fairly moist garden loam well fertilized. Largely used for borders or massed in beds. Excellent for cut flowers. Grouping—can be planted in separate beds or with Snapdragons, Stocks, Carnations, Sweet Williams, Petunias. Varieties: (Annuals) **Chinensis**, flowers produced in clusters, medium sized, fragrant flowers with fringed petals. **Single Mixed. Double Mixed. Heddewigi**, velvety flowers. **Double Scarlet, Double White, Double Mixed, Single Mixed.**

**Packet, 10c.**

**POPPY** (*Papaver*) (A&P). Flowers growing from 6 inches to 4 feet, according to type. Perennials are planted in fall and annuals in early spring. All kinds require a well drained, moderately rich, light loam, and not too moist soil. Grouping—effective by themselves or grouped in a mixed border with yellow and orange Snapdragons, Lobelia, etc. Varieties: (Annual) **Shirley**, height 1 to 2 feet, branching plant with gray-green finely divided leaves; fringed flowers, white, through shades of pink or deep scarlet. **Single Mixed, Double Mixed.**

**Packet, 10c.**

**California Poppy** (*Aurantiaca*). The true California Poppy—color is deep orange. (Perennial.)

**Packet, 10c.**

**Elmonte Tangerine**, deep orange, grows 2 feet high.

**Packet, 10c.**

**Iceland**, grows 1 to 1½ feet, slender stemmed, with a tuft of bright green leaves; leafless stems bearing single, medium large, delicately fragrant flowers in light yellow, orange, orange-scarlet, rose pink.

**Packet, 10c.**

**Stanford Giant Mixed, Oriental Mixed**, grows 3 to 4 feet, stout, leafy stems, rough, hairy, large leaves; very large, terminal flowers, mixed colors in salmon, red, orange, pale pink.

**Packet, 10c.**

**PORTULACA** (*Rose Moss*) (hA). An exceptionally fine flower for dry sunny spots where most plants are unable to thrive. A dwarf plant only 6 inches in height that blooms profusely from June to August. Brilliant colors of red, yellow, pink, white, and striped. Sow seed in May, when the ground is thoroughly warmed. In sowing mix seed with many times its bulk in dry sand. Requires a fairly rich sandy loam and the hottest position to give the best results. Used on narrow borders or on dry embankments. Plant alone. Varieties:

**Single Mixed and Double Mixed.**

**Packet, 10c.**



PETUNIA, MARTHA WASHINGTON

**PRIMULA** (Primrose) (hP). A favorite for growing outdoors in mild climates and very fine for potting, window boxes and rockeries. Seeds sown in early fall usually, or in early spring. Requires a rich, light, moist, acid moderately fertilized loam. Best in a cool, somewhat shady spot. Use Ortho Nursery Volk at time of transplanting to avoid root weevil. Variety: **Polyanthus**, grows 8 inch high. Soft, light green leaves, slender scapes bearing lavender-mauve flowers, blooming December to May. **Mixed.**

**Packet, 25c.**

**PYRETHRUM** (Painted or Single Daisy) (hP). Grows 1 to 3 feet. Has long, slender flower stems; clear green, finely dissected fern-like leaves; daisy-like flowers several inches across that bloom from April to August. Sow seeds in early spring in a cool, well drained, rich, loamy soil well fertilized. Used in the perennial border combined with pink and rose Sweet Williams, Iceland Poppy, Sweet Scabiosa, Nicotiana and Coral Bells. **Mixed.**

**Packet, 10c.**

**SALPIGLOSSIS** (Painted Tongue) (hA). One of the easiest of annuals to grow. Erect branching plants, reaching a height of about 2 feet. Produces funnel-shaped flowers 2½ inches long and wide, of velvety texture and in many colors, including rich tones of purples, blues and reds; the interior of the blossoms is strikingly veined, giving a "paisley effect". Blooms from May until killed by frost. Sow in the full sun in fairly rich soil as early as possible and preferably in the place where they are to grow. **Mixed.**

**Packet, 10c.**

**SALVIA** (tP). Grow from 2 to 4 feet high and bloom the first year from seed. The brilliant red tubular blossoms are borne on long stems in racemes or spikes, flowers blooming in summer and fall. Any average garden position suits them, although they are at their best when planted in an enriched loamy soil where they get sun most of the day. Best with background of shrubs having dark green, glossy leaves. Sow seeds in early fall or early spring. Varieties: **Bonfire, Splendens.**

**Packet, 10c.**

**SCABIOSA** (Pincushion Flower) (hA&P). Are easily grown in an open sunny position from seed started indoors or planted in the open ground in May. Grows 1½ to 3 feet high. One of the most important annuals for cut flowers, bloom on long, slender stems, which are exceedingly graceful. Grouping—for the perennial and mixed borders combining with Ageratum, Gladiolus, Snapdragons, Perennial Phlox, Sweet Williams, Stocks and Columbine. Varieties: **Azure Fairy**, blue. **Fire King**, scarlet. **King of the Blacks**, reddish black. **Loveliness**, pink. **Double Mixed. Blue Moon**, deep lavender blue. **Caucasica Hybrids**, perennial growing to 2 feet, with pale blue flowers.

**Packet, 10c.**

**SCHIZANTHUS** (Poor Man's Orchid or Butterfly Flower) (hA). Very showy plant having finely-cut foliage and white, lilac, bluish, or pink flowers. Grows 1 to 1½ feet, blooms May to August. Sow seed in early spring in rich, sandy, well fertilized and sandy loam. **Mixed.**

**Packet, 10c.**

**STATICE** (Sea-pink, or Thrift) (hP). Dwarf plant, growing from 1 to 2 feet. Has narrow leaves in rosettes and small flowers in heads. Grow in any soil and require but little water. Varieties: **Latifolia** (Sea Lavender) (P), produces large branching sprays of minute lavender-blue flowers that are invaluable for cutting; may be dried and used with everlasting flowers. **Sinuata** (hA), an everlasting flower which is increasing in popularity.

**Packet, 10c.**

**SNAPDRAGONS** (*Antirrhinum*) (hA). Seed should be sown indoors in March or April. It may be slow to germinate, but after the true leaves have formed the growth is usually rapid. The small plants can be transplanted to the open as soon as danger of frost is over; they will flower from July until frost if the blossoms are packed as soon as they fade. Seed may also be planted in the open in August, and the seedlings transplanted to pots for winter bloom, or the plants can be covered with a mulch over winter to give earlier summer flowers.

To encourage the growth of flower-bearing side branches, the central bud



should be pinched out when transplanting; followed by occasional pinchings of other too-vigorous shoots, this will result in a compact oval plant covered with short racemes of flowers.

Rust, the most serious snapdragon disease, is found all over the United States on both greenhouse and outdoor plants. Dusty, chocolate-brown pustules (spore masses) are produced on the under side of the leaves and on the stems. Weekly applications of a good copper spray during the rainy periods and fortnightly applications in dry weather will effectively control rust if a start is made early in the season. Beds should be surface irrigated if possible, rather than watered with a hose or sprinkler so as to keep the foliage dry and prevent the spores from being spread by splashing water.

Snapdragons may be grouped, according to color with Scabiosa, Gladiolus, Larkspur, Delphinium, Columbine, Coral Bells, Michaelmas Daisy, Clarkia, Chrysanthemum.

We offer the **Majus Rust Proof** variety in the following color: **Butter Cup**, canary yellow, shading to creamy yellow; **Copper Shades**; **Pink Shades**; **Scarlet**; **Shasta White**; **Fiery Red** and **Mixed**.

**Packet, 10c.**

**STOCKS** (Gillyflower) (hA). Sturdy flower spikes (growing 1 to 1½ feet) covered with rosette blossoms in soft colors. Stocks require a rich soil of a sandy, well manured loam. Sow seeds in flats and transplant outside when all danger of frost is over. Seed will produce about 75% plants bearing double flowers. For a mass of all double flowers, set close together and remove the single flowered plants when first flowers appear. Stocks are outstanding garden favorites because of their delicately colored spikes and fascinating penetrating odor. Grouping—Effective in both the annual and mixed borders, grouped alone, several varieties together, or combined with Daffodils and Narcissus, Violas and Pansies. Varieties: **Double Early Giant Imperial**, very early blooming and grows 2½ feet tall. **Rose**, deep rose pink. **Elk's Pride**, royal purple. **Canary Yellow** (Golden Ball). **Blood Red**, **White**, **Mixed**. **Virginia Stocks**, grows 6 to 12 inches high and the pods are not horned, **Rose**, **Mixed**. **Evening Scented Stocks**, grown principally for the sweet perfume in the small, single mauve-colored flowers at twilight. **Mixed**.

**Packet, 10c.**

**SWEET PEAS** are one of the most popular annual flowers grown throughout the world. Their popularity is justified, as no other flower produces such an abundance of colorful blossoms for garden beauty and indoor flower arrangements. Because so many people enjoy the growing of these rewarding flowers, there have been a number of different theories as to the "best" way to produce a prize winning crop. Every man to his own choice. We will suggest the cultural process most commonly used by Northwest gardeners.

Some gardeners prefer planting Sweet Peas in the fall. If this method is used it is necessary to dig a trench about 12 inches deep. Place the seed at 2-inch intervals and press in with your finger. Cover the seed with about two inches of soil and firm down. In early spring, as the seed starts to grow through the ground keep covering the tender shoots until the normal ground level is reached. The ad-

vantage of this method is the deep, heavy root system that will develop . . . giving a longer blooming period after hot summer weather arrives.

Most gardeners follow the practice of early spring planting. This requires less care and in the opinion of many, the results are just as successful. When seed is planted in January or February it should be placed at a depth of 3 or 4 inches. After the first of March this depth should be reduced to 2 inches.

As is the case in all gardening, soil preparation is of the utmost importance. The roots of Sweet Pea vines grow much deeper than other annuals. Therefore, it is necessary to make your seed bed to a corresponding depth. The bed should be about 24 inches wide and cultivated to a minimum depth of 18 inches. Soil should be mellow, so add enough peat moss or compost, also bone meal, to make good garden loam. Work all the materials in well.

Sweet Peas are essentially a cool weather plant. Keep this in mind when selecting a location for your planting. Hot afternoon sun should be avoided whenever possible. Not only does the hot sun "sap" the tender foliage, thus reducing the blooming period . . . but it tends to fade the delicate colors. An eastern exposure with plenty of morning sun is ideal.

Seed planting should be done at the first sign of spring. Washington's Birthday (February 22nd) is the day scheduled by many western gardeners as the time to plant their favorite bed of flowers. Whatever the day, it is best to put it down on your calendar as one of the first things to do in your garden, come spring.

When plants are up about 6 inches they should be thinned to 6 to 8 inches apart. If left closer it will result in weak plants, producing poor flowers with short stems.

During the early growing stages be sure the ground is kept moist. As soon as the vines start blooming it is advisable to reduce watering to once a week. When this is done be sure sufficient quantities are applied to thoroughly soak the soil to a deep level. Fertilize lightly with a complete plant food at three or four week intervals.

**Pkts. 10c; ½ ounce, 25c; 1 ounce 45c.**

#### PINK AND CREAM

**Ascot.** Clear light rose pink. Very large blooms.

**What Joy.** Colorful primrose, shaded to soft cream.

#### ORANGE AND SALMON

**Barbara.** A beautiful shade of orange salmon.

#### RED AND MAROON

**Charming.** Brilliant blossoms of rose cerise.

**Welcome.** The most dazzling of all scarlets. Strong stems.

**Warrior.** Dark maroon.

#### LAVENDER, BLUE

**Austin Frederick Improved.** Ruffled, pure lavender.

**Reflection.** A lovely sun-proof clear cornflower blue.

#### WHITE

**Avalanche.** Glistening white of great substance.

#### GIANT RUFFLED SPENCER MIXED SWEET PEAS

**Packet, 10; ½ ounce, 20c; 1 ounce, 35c.**

**NINE 10c PACKETS  
EACH A SEPARATE COLOR**

*all for 50¢*



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The greatest flower seed value ever offered. Nine individual 10c packets of prize winning

**GIANT SPENCER SWEET PEAS**

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A packet each of the soft shades of Pink, Cream, Salmon and White. Dazzling Scarlet, along with brilliant Cerise, Maroon, Lavender and Blue. Enough seed to plant a row 30 feet long. An abundance of long stemmed blooms from early summer until frost.

Now . . . an important improvement has been added to this Diamond Quality Sweet Pea Collection. All seeds have been treated with Rootone . . . the plant hormone that assists nature in establishing a hardy root system.

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**DIAMOND QUALITY SWEET PEA  
COLLECTION**

**from your favorite garden supply  
store.**

**Enjoy the beauty of these colorful  
flowers all summer long.**

**Portland Seed Co.  
DIAMOND QUALITY SEEDS**



**ZINNIAS (hA)**. One of the most satisfactory flowers to grow through the summer, as being natives of Mexico, they thrive in even the hottest weather if given plenty of fertilizer and a moderate amount of water. For best results, provide a rich, deep soil and give water when needed. Application of a complete fertilizer at 3 or 4 week intervals helps produce larger, more perfect flowers. Sow seeds indoors in flats, or they may be started in the open at the same time as other hardy annuals. Giant types should be no closer than 18 inches apart; this allows free branching and sturdy plant development. All types blossom from early summer until hard frost. Grouping—Makes a fine effect in mass plantings grouping together varieties that harmonize in color; in the mixed border combine with Anchusa, deep blue Delphinium, blue Cornflower, Salpiglossis, African Marigold.

**Fantasy Zinnia** flowers are very informal in appearance, composed of a mass of shaggy, ray-like petals, which give a delicate, graceful effect, quite different from the stiff, formal Zinnias to which we are accustomed. Plants grow from 2½ to 3 feet tall. Blossoms are from 2½ to 3 inches in diameter. Mixed. **Packets, 10c.**

**Super Crown o'Gold Pastel Tints** are the very finest large flowered Zinnia introduction in recent years. Strictly a mixture of pastel tints, a wide range of shades, including soft yellow, old gold, light pink, apricot pink, various shades of salmon, peach and buff, lively cerise salmon, as well as pure white and cream. The plants are strong and robust, growing about 3 feet tall, and flowers are borne profusely through the season. **Packet, 10c.**

**Dahlia Flowered** are strong and robust, growing about 3 feet tall and bear many long stems of showy, double huge flowers. This type is preferred for general garden use, producing a very brilliant mass of color, in bright, intense shades. The flowers are more or less cup-shaped in appearance; the petals, instead of lying flat upon each other, are incurved, producing an upstanding, stiff, somewhat coarse flower. Flowers are from 4 to 5 inches in diameter. We offer the following varieties: **Exquisite**, light rose. **Golden State**, golden yellow. **Crimson**

**Monarch**, deep crimson. **Dream**, rosy lavender. **Oriole**, orange. **Meteor**, true red. **Polar Bear**, white. **Old Rose**, **Canary Bird**, **Purple Prince**, Mixed. **Packet, 10c.**

**Lilliput or Pompon Zinnia** is among the most popular for cut flower and border use. The flowers are small, compact and symmetrical in shape. 1 to 1½ inches in diameter, borne in great quantities on neat, compact growing plants which usually reach a height of from 12 to 15 inches. If you have room for two rows of Zinnias, sow the seeds of the Dahlia flowered in the background and Lilliput Pompon in the front row. This makes an effective combination and will give a greater variety of flowers for cutting purposes. We offer the following varieties: **Salmon Rose**, **Canary Yellow**, **Scarlet Gem**, **Golden Gem**, **Lilac Gem**, **White Gem**, Mixed. **Packet, 10c.**

**Mexican Dwarf Zinnia** is by far the finest dwarf type Zinnia yet developed. The sturdy plants reach a height of not over 1 to 1½ feet and are literally covered with blooms throughout the entire summer. A wide range of strikingly different colors makes them outstanding in any flower bed. All sorts of reds, yellows and oranges blended with maroon, mahogany, rust or white. Every individual blossom is an interesting study in itself. **Mixed. Packet, 10c.**

**Elegans Dwarf Zinnia** is not a new type but not generally known by most gardeners. The variety is excellent for border use and can be used most effectively in a solid bed where a lot of color is desired in low growing plants. These Zinnias bloom from early summer until late fall and are fine for cut flowers. **Mixed. Packet, 10c.**

**WILD CUCUMBER (hA)**. This is a useful climber where a rapid and vigorous growth of vine is desired for covering trellises, tree stumps, fences, etc. The vine has abundant foliage and is thickly covered with sprays of small white fragrant flowers, followed by numerous prickly seed pods. Grows about 20 feet. Sow seeds late in fall or early in spring where plants are wanted. **Packet, 10c.**

**A HUGE GARDEN**  
of  
**Zinnias**  
for **25¢**



**FIVE**  
**INDIVIDUAL**  
**10c**  
**PACKETS**

We're anxious for all of our customers to enjoy the glorious beauty of these easy-to-grow Giant Zinnias . . . so, for a limited time, we are offering this popular 35c Diamond Quality Collection for only 25c . . . with the coupon.

Actually, there are five full size, 10c packets in each collection. Five individual colors ranging from deep Crimson to Polar Bear White. Lavender, Pink and Canary Yellow. A riot of color!

No flower is so rewarding to the gardener. Their long, sturdy stems and large, colorful blossoms delight the most severe critic. Rugged . . . are these flowers of old Mexico. They thrive in even the hottest weather, requiring only a minimum amount of care.

Abundant quantities of gorgeous blooms from early summer to late fall. Colorful beauty to enhance your garden, and perfect for flower arrangements indoors. Plants grow about 3 feet tall with flowers as large as 5 inches in diameter.

Take advantage of our special coupon offer . . . come in early and select your seeds and other garden needs while stocks are plentiful.

*This Coupon Worth*

**10c**

**WITH THE PURCHASE OF A SPECIAL  
35c ZINNIA COLLECTION**

**THIS COUPON EXPIRES MAY 31, 1950**

**WITH THIS  
COUPON**



# FARM SEED PLANTING CHART

CROP	Pounds Per Acre
<b>Alfalfa</b> .....	10 to 15
<b>Bent Grasses:</b>	
Astoria .....	7 to 10
Highland .....	7 to 10
Seaside .....	7 to 10
<b>Bluegrasses:</b>	
Kentucky .....	15 to 25
<b>Bromegrass, Smooth</b> .....	18 to 20
<b>Buckwheat</b> .....	20 to 30
<b>Cereals:</b>	
Barley .....	75 to 100
Oats .....	80 to 100
Rye .....	75 to 100
Wheat .....	80 to 120
<b>Cheat or Chess</b> .....	60 to 75
<b>Clovers:</b>	
Alsike .....	10 to 12
Ladino .....	5 to 6
White .....	6 to 8
Red .....	10 to 15
Mammoth Red .....	10 to 15
Sweet—Yellow .....	15 to 20
Sweet—White .....	15 to 20
Crimson .....	12 to 15
Strawberry .....	4 to 5

CROP	Pounds Per Acre
<b>Flax—Seed</b> .....	30 to 45
<b>Kale—1000 Head:d</b> .....	1 to 1½
<b>Meadow Foxtail</b> .....	12 to 14
<b>Milletts:</b>	
Foxtail .....	20 to 25
Japanese .....	25 to 35
Proso or Hog .....	25 to 40
<b>Orchard Grass</b> .....	20 to 25
<b>Peas—Field:</b>	
Austrian .....	75 to 90
Canadian .....	70 to 100
<b>Rape</b> .....	8 to 10
<b>Redtop</b> .....	7 to 10
<b>Reed Canary Grass</b> .....	6 to 8
<b>Corn—Field</b> .....	8 to 12
<b>Crested Dogtail</b> .....	20 to 25
<b>Crested Wheatgrass</b> .....	12 to 15
<b>Fescues:</b>	
Chewing's .....	20 to 25
Meadow .....	20 to 25
Tall .....	20 to 25

CROP	Pounds Per Acre
<b>Rye Grasses:</b>	
Domestic—Oregon .....	20 to 25
Perennial—English .....	20 to 25
<b>Sorghum</b> .....	4 to 8
<b>Soybeans</b> .....	50 to 60
<b>Sudan Grass</b> .....	20 to 30
<b>Sunflower</b> .....	10 to 15
<b>Tall Meadow Oat-Grass</b> .....	20 to 30
<b>Timothy</b> .....	10 to 15
<b>Velvet Grass or Mesquite</b> .....	15 to 20
<b>Vetches:</b>	
Common or Gray .....	60 to 75
Hairy or Winter .....	30 to 40
Hungarian .....	60 to 75
Purple .....	60 to 80



## HOTKAPS

Give your flowers and vegetables an earlier safe start. HOTKAPS provide individual HOTHOUSES for seedlings and young plants, provide positive protection against UNEXPECTED FROSTS, STORMS, INSECTS, ripen plants weeks earlier.

**BIG GARDEN PACKAGE of 25 only 70c—Setter Free**

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for cuttings, seeds and bulbs

# ROOTONE®

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Rootone stimulates the natural tendency of seeds, cuttings and bulbs to put out roots. Rooting is faster and heavier, resulting in bigger, earlier plants. Endorsed and used by leading growers everywhere.

Trial packet, 25c • 2-oz. package, \$1  
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Ideal support for SWEET PEAS, GARDEN PEAS, POLE BEANS, CUCUMBERS, TOMATOES. Hung in 5 minutes. Doesn't rot like string, nor burn tendrils like wire. 3 sizes —

60-inch x 72-inch, 65¢  
60-inch x 96-inch, 85¢  
60-inch x 180-inch, \$1.25

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plants, flowers,  
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PLANTABBS make plants and flowers grow like magic! This rich PLANT FOOD in convenient TABLET form is ideal for potted plants, window boxes, all garden flowers, vegetables and shrubs. PLANTABBS are clean, odorless, easy to use. 30 tablets 25c; 75 tablets 50c; 200 tablets \$1.00; 1,000 tablets \$3.50.

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**PLANTABBS**  
PLANT FOOD TABLETS PLUS B1

## THE WEED KILLING MIRACLE

## NEW IMPROVED WEEDONE®

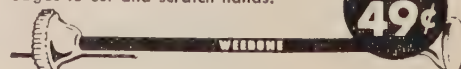
Contains the powerful 2,4,5-T and 2,4-D

Now Weedone kills woody plants as well as dandelions, plantains and other lawn weeds, without killing grass. It kills poison ivy, poison oak, the brambles (blackberry and raspberry), honeysuckle and over 90 other woody plants. Sprayed on top and sides of tree stumps, it prevents resprouting.

The new, improved Weedone does not give off vapors that cause injury to rose bushes, tomatoes, flowers or ornamental shrubs. Harmless to humans and animals

8-oz. can \$1      1-gal. can \$6.95  
1-qt. can \$2.75      5-gal. can \$25

Weedone Plastic Applicator. Cap makes handy ½-oz. measure and fits any screw-top gallon jug. All plastic; no sharp metal edges to cut and scratch hands.



ONLY  
**49¢**

## SPOT-KILL Lawn Weeds WEEDUST

(TRADEMARK)

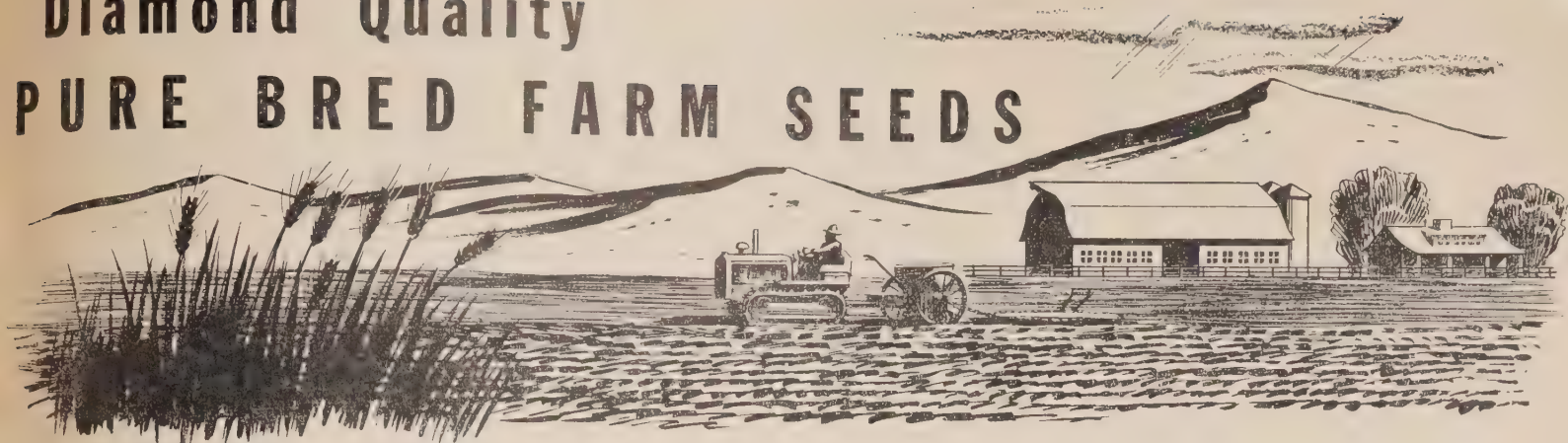
2,4-D in the ready-to-use can

Kill those here-and-there weeds in your lawn with Weedust—2,4-D in powder form. Just shake a pinch of Weedust directly on the weed from the can. No mixing or measuring or sprayer needed.

Large size can, 75c  
Enough to kill 1,000 weeds



# Diamond Quality PURE BRED FARM SEEDS



## ALFALFA SEED

**Common Alfalfa.** There are various strains of Common Alfalfa distinguished by the name of the state in which grown, such as Idaho, Oregon, Northern California, etc. Common Alfalfa from above named sections is adapted to Oregon and Washington climatic conditions. Common Alfalfa differs from the Grimm Alfalfa mainly in the root system. The tap root in Common does not show the tendency to branch and the crowns are not as spreading.

**Cossack Alfalfa.** 15 pounds per acre. An introduction from Russia and a hybrid between Common and yellow-flowered Alfalfas.

Growth is generally upright with stems medium size, plants are very leafy and fairly large leaves. Flowers are variegated, ranging from white and yellow to dark purple.

Rooting system is large with heavy, deep penetrating tap root being the rule. A very winter hardy variety adapted for growing under practically the same conditions as Grimm Alfalfa.

**Grimm Alfalfa.** 15 pounds per acre. The most important member of the variegated group in the United States. Introduced from Germany by Wendelin Grimm.

A very winter hardy, long-lived variety. The tap root shows a tendency to branch and the crowns are low set and spreading. These characteristics contribute much toward its ability to resist extreme cold, alternate freezing, thawing and heaving. Succeeds in most types of soil except those heavily charged with alkali, will not grow in waterlogged soil.

**Ladak Alfalfa.** An introduction from Northern India.

The growth in general is quite upright with stems medium size, plants are very leafy, medium size leaves. Flowers are variegated, ranging from whitish and yellow to very dark purple.

The rooting system is extensive, with most plants being tap rooted.

One of its outstanding characteristics is its ability to produce a heavy first crop. It is sometimes referred to as one-cut Alfalfa, mainly for the reason that under certain conditions its comeback is rather slow. It is very well adapted to conditions where only one crop of forage can be secured a year because of lack of moisture and short growing season.

It is extremely winter hardy, and long-lived and is much more resistant to bacterial wilt than Grimm, Common and other varieties closely related to these.

## CLOVER SEED

**Alsike Clover** (*Trifolium Hybridum*). 12 pounds per acre. A long-lived perennial, adapted to a wider range of both climatic and soil conditions than Red Clover. Thrives well on clay, clay loams, study loams and muck soils, providing abundant moisture is available. Will survive where soil is waterlogged, making it well adapted to growing under irrigation. An excellent pasture plant and when sown for hay is usually mixed with Red Clover, Timothy or Red Top.

**Crimson Clover** (*Trifolium Incarnatum*). 15 pounds per acre. An annual plant having a strong tap root, shows no very marked soil preferences, succeeding on both sandy and clayey soils as long as they are well drained. From the crown of the root numerous upright stems develop which reach an average height of 1 or 2 feet. Has a high nutritive value and can be used for either hay or pasture, valuable for soiling purposes in short rotations, as the green matter produced is heavy, and the roots penetrate deep into the ground.

**Ladino Clover** (*Trifolium Repens latum*). 5 pounds per acre. Also known as Giant White Clover, growing about twice the size of White Dutch Clover. It is a Perennial of medium long life, having a short tap root. The surface stems lie flat on the ground and commonly produce fibrous roots at the joints. Ladino Clover usually makes a growth of 8 to 12 inches in height. Can be grown on rather shallow soils where well supplied with lime, phosphate, humus and moisture. Ladino is not a deep-rooted plant and thrives best on medium heavy type soils where there is constant but not excessive moisture. This is primarily a pasture plant and may be sown alone or with a combination of other grasses.

**Lespedeza.** 15 pounds per acre. Classed as a summer annual, however, in sections where adapted will usually reseed itself and will thus occupy the land for two or more years. The plants are usually much branched, stems wiry, bearing numerous small leaves, under favorable soil and climatic conditions the plants commonly grow about 12 inches high. Adapted to practically all types of soil if well drained near the surface. Require a warm growing season and will not withstand frost. Used mainly as a pasture plant.

**Lotus Corniculatus.** 8 to 12 pounds per acre. A long-lived perennial. Habits somewhat similar to that of Alfalfa in that it is rather distinctly a bunch-type plant.

It is not exacting as to soil requirements, and makes good growth on sandy and light gravelly soils, as well as on heavier clay loam. It has a rather extensive, deep rooting system and will succeed where soil moisture may be rather short for, at least, a portion of the year. It is quite often harvested for hay and under favorable conditions will reach a height of 18 to 30 inches. It makes a very good pasture plant and has a long pasturing season in any one year. Spring seeding, March to May 15, is considered best for the Pacific Northwest.

There are two primary types of *Corniculatus* and are referred to as the Narrow-leaved and Broad-leaved. The Narrow-leaved type is the most common. **Lotus Major.** 4 to 6 pounds per acre. This is an extremely long-lived, semi-low growing perennial. Well adapted to low, wet lands that are relatively high in fertility.

It spreads by underground runners and has a rather shallow rooting system.

Lotus Major is one of the best legumes for permanent pasture purposes, owing to its extremely long life.

Spring seeding, March to May 15, is recommended for the Pacific Northwest, depending upon seasonal conditions.

There are two distinct types of Lotus Major, generally referred to as the Smooth-leaved and Hairy-leaved. The Hairy-leaved type is the more common one and is growing in several sections of Oregon.

**Red Clover** (*Trifolium Pratense*). 15 pounds per acre. Usually classed as a short-lived perennial and is considered the most important of all leguminous forage crops. Requires a well drained soil, does better in clay soils than in loams and better in loams than in sandy soils. Is especially intolerant to waterlogged soils.

**Mammoth Red Clover** (*Trifolium Pratense Perenne*). 15 pounds per acre. A large variety of Red Clover more decidedly perennial than common Red Clover, requiring the same climatic and soil conditions. The stems are long, coarse and generally spreading. Mammoth red blooms about 10 days later than common red and grows more slowly after mowing. Its coarse growth makes the hay less relished by stock. However, its heavy growth makes it an excellent soiling crop.



**Strawberry Clover** (*Trifolium Fragiferum*). 4 to 5 pounds per acre. A low-growing perennial pasture legume, spreading vegetatively by creeping stems that root at the nodes. The leaves, stems and habit of growth are similar to white clover.

It is adapted to a wide range of conditions and has been successfully established in most of the Western States.

It is of particular value on wet saline or alkaline soils, although it will thrive in normal soils. Will also thrive under wide extremes of temperatures, ranging from 40 degrees below zero to high summer temperatures.

Spring seeding is recommended on a firm, moist seed bed.

**White Sweet or Bokhara Clover** (*Melilotus Alba*). 20 pounds per acre. A biennial having a strong tap root, produces numerous leafy stems, growing from 4 to 6 feet in height when firmly established. Grows readily on practically all types of soils. Endures poorly drained soils better than Alsike, used mainly as a pasture plant and for green manure.

**Yellow Sweet Clover** (*Melilotus Officinalis*). 20 pounds per acre. A biennial having the same habit of growth as the White Sweet, requiring the same soil and climatic conditions. Stems are less leafy and smaller in size. The plant does not grow quite as tall and is about two weeks earlier.

**Yellow Sweet Clover Annual** (*Melilotus Indica*). 20 pounds per acre. Known as Yellow Blossom sour clover. Not recommended for forage or hay, used almost entirely for cover crop. Soil requirements same as other sweet clovers.

**Subterranean Clover** (*Trifolium Subterranean*). 12 to 15 pounds per acre. The name of this clover is derived from its habit of pushing the seed head into the soil sometimes to a depth of two inches, where the seeds mature and germinate when favorable conditions develop.

Subterranean Clover is an annual that starts growth in the fall or late winter.

The stems are prostrate, assuming the form of runners. The leaf is similar to that of other clovers. The flower heads usually bear three small white to pinkish white flowers in a cluster at the tip of the stalk. A single seed develops from each flower. The mature seed is dark purple, about double the size of a crimson clover seed.

Under Pacific Northwest conditions this clover probably requires for survival, at least 20 inches of rainfall during the fall, winter and spring, and the temperatures remaining above 10 degrees Fahrenheit. The plant does not appear to be tolerant of poor drainage. It will thrive on soils that are quite acid.

This plant starts growth much earlier in the spring than other legumes.

**White Dutch Clover** (*Trifolium Repens*). 8 pounds per acre. A long-lived but shallow-rooted perennial. The stems creep on the surface of the ground and root abundantly. On this account the growing point is seldom injured by mowing or

grazing. Grows in practically all types of soil provided moisture is abundant, thriving best in loams and clay soils. White Clover is considered to be one of the most important pasture plants, generally used in pasture mixtures and is also used to a large extent in lawn grass mixtures.

## COVER CROP SEED

**Austrian Winter Field Peas.** A true winter variety. Plants resulting from fall seeding pass through a definite period of winter dormancy before growth begins in the spring. The plants are viny, generally similar to other varieties of field peas, under average conditions attain a length of 3 to 4 feet. The blooms are purple. The peas are very hardy, zero temperatures do little damage unless freezing and thawing periods are severe. They are adapted to well drained clay and sandy loams. The Austrian pea is used for all types of forage such as hay, silage, soiling and pasture.

**Canadian Field Peas.** Quite similar to the Austrian Winter Field Pea. The stems and leaves are somewhat larger and the blooms are white. The variety is not winter hardy, being adapted only to moderate temperatures. They do best on loams or clay loams but will succeed on most types of soil if well drained.

The Canadian Field Pea is used for practically the same purposes as the Austrian in general farming. Both varieties are usually sown with a small grain crop.

**Vetches** make excellent feed, either green or as hay, and are also exceedingly useful as cover and green manure crops. They are usually seeded with grain, oats being the favorite for the reason separation is easily made when harvesting vetch for a seed crop.

**Common Vetch.** The most important annual legume grown in Oregon, used extensively as a green feed crop for spring and summer, also makes an excellent manure and cover crop. Vetch is best suited to a moist climate free from extremes of heat or cold during the growing season. Is adapted to heavy, well drained soils. The stems are slender, growing from 3 to 5 feet or more in length, with about 7 pairs of leaflets and a terminal tendrill. The flowers are violet purple, rarely white, and are borne in pairs on a very short stalk.

**Hungarian Vetch.** A fine stemmed annual making a semi-erect growth from 2½ to 4 feet in length and somewhat hairy overall. The flowers are brownish white in color and are borne in groups of from 2 to 8. Hungarian Vetch is quite winter hardy and is adapted to a wide range of soils; lands with poor drainage and lands that are heavy, sour and white will often produce crops of Hungarian Vetch while other crops have failed.

**Hairy Vetch,** also known as Sand Vetch. The stems are slender, usually growing to an average length of 6 to 8 feet. The leaves are narrow, violet blue, borne on long stems in dense one-sided clusters of about 30. Hairy Vetch is quite winter hardy, rarely winter killing if well estab-

lished in the fall; adapted to a wide range of soils, doing best on sandy or sandy loams but does not succeed in very wet soils.

## PASTURE GRASS SEED

**Brome Grass** (*Bromus Inermis*). 20 pounds per acre. A long-lived perennial with a creeping root-stock. These are much branched, roots at the joints and produces numerous upright stems. The stems are rather stout, from 1 to 4 feet high, and carry many spreading, broad, smooth leaves varying from light to dark green. The upright stems produced are scattered, therefore, the plants are not tufted but form loose mats. Brome Grass is adapted to regions of rather low rainfall, endures winter cold remarkably well and no other cultivated perennial grass has shown a higher degree of drought resistance. Prefers rich loams and clay loams and has succeeded well in sandy soils.

**Cheat or Chess** (*Bromus Secalinus*). A smooth annual grass from 1 to 3 feet tall with flat blades and open, drooping panicles, sometimes grown as an annual hay crop, and should be cut when the seed is in the dough stage. Adapted to the same soil conditions as wheat. The plants are similar to those of wheat and formerly the idea was held that cheat was a degenerative or changed form of wheat, whence its name.

**Cested Wheat Grass** (*Agropyron Cristatum*). 15 pounds per acre. A hardy drought-resistant perennial bunch grass having an extensive root system, especially adapted to regions where the temperatures are severe and the moisture supply is limited. The plants have a dense, dark green foliage during the early part of the season. After seeding the plants appear less leafy but the stems are fine and when harvested early make hay of excellent quality. Does well on practically all soils ranging from light sandy loam to heavy clay.

**Fescue Alta** (*Festuca Elafor* Var. *Arun dinacea*). 12 to 14 pounds per acre. A deep-rooted, long-lived perennial grass, having numerous dark green basal leaves. Attains heights of 3 to 4½ feet.

It has a wide range of climatic adaptations and grows on a diversity of soils, preferring fertile, moist, rather heavy land, but will thrive on most Oregon type soils. It is very winter hardy and will tolerate poorly drained conditions, surviving in standing water for long periods during the winter when the plants are semi-dormant.

Fescue Alta is an extremely popular grass because of its excellence in pastures, high yields of forage, deep root system and long growing season.

It may be either fall or spring planted. Fall planting considered best for Western Oregon.

**Fescue Meadow** (*Festuca Elatoir*). 20 pounds per acre. A deep-rooted, long-lived perennial. The stems are 18 to 24 inches high, smooth, rather slender. Most of the leaves are produced by numerous sterile shoots from the root stock. The leaves are dark green, long and broad. Prefers rich, moist or even wet soils; does



not succeed well in sandy soils. Thrives as well as Orchard grass in shady places. It is better adapted for pastures than for meadows but may be used for both purposes.

**Mesquite** (*Holcus Lanatus*). 20 pounds per acre. This plant is primarily adapted to moist, cool climates and under such conditions is not particular as to soil.

The plants form thick, rather high tussocks. The stems are erect, growing from 2 to 3 feet high. The whole plant has a velvety appearance, hence the name Velvet Grass is sometimes used. Mesquite should be sown with a mixture of other grasses, as stock does not take to it readily when grown alone.

**Meadow Foxtail**—Moistland Grass (*Alopecurus Pratensis*). 12 to 14 pounds per acre.

This is a long-lived perennial, adapted to a cool climate. However, it is not sensitive to heat or cold, as it will grow successfully where summer temperatures occasionally reach 100 degrees F. and where winter temperatures may drop below zero. Meadow Foxtail is especially suited to swampy or overflow lands and will stand long periods of overflow, especially during the dormant period. It is primarily a pasture plant and is one of the first grasses to start growth in the spring. Grows erect, usually about 3 feet high. The heads are very much like that of timothy and many times is mistaken for timothy. The leaves are dark green, smooth, medium broad and numerous. Both fall and spring seedings are successful in the Pacific Northwest.

**Orchard Grass** (*Dactylis Glomerata*). 25 pounds per acre. A long-lived perennial forming dense, circular tufts, a typical bunch grass producing no stolons and hence never forms a complete sod. The stems are 2 to 3 feet high and are crowned and surrounded at the base by numerous shoots. The leaves are long, broad and flat, rather soft in texture. Grows in practically all types of soil, being best adapted to clays or clay loams. Succeeds well in shady places and also does quite well where rainfall is rather scanty. Starts growth early in the spring.

**Pasture Mixtures.** 35 pounds per acre. Owing to the fact that so many types of Pasture Mixtures are used, we realize that it would be impossible for us to prepare in advance mixtures that would conform with the requirements of each formula recommended.

Therefore, we have confined our efforts to one Pasture Mixture only, namely, P. S. Co.'s ALL PURPOSE. In this mixture we use only the very best grades of seed carrying a high percentage of purity and germination and only those seeds that are adapted to the general soil and climatic conditions throughout the Pacific Northwest and for this reason we feel that this mixture will meet with the average general requirements.

**Reed Canary Grass** (*Phalaris Arundinacea*). 8 pounds per acre. A long-lived, rather coarse perennial grass. The plants are resistant to cold, both as seedlings and mature plants. The rapidly spreading short underground stems soon form a dense sod;

growth starts early in the spring and continues until late fall. The plants grow from 4 to 6 feet in height. The stems are stout, smooth and seldom lodge. The leaves are broad and nearly 1 foot long.

Reed Canary is especially adapted to swampy or overflow lands of sandy, mucky or peaty nature, makes an excellent pasture plant and may also be used for hay.

**Oregon Rye Grass.** Also known as: Domestic Rye Grass, Common Rye Grass, Western Rye Grass, Pacific Rye Grass. These names are used to designate Common Rye Grass grown in the United States.

Common Rye Grass grows from 2 to 3 feet tall; is leafy and tender and when used as pasturage, is very palatable to all classes of livestock. It gives very good fall, winter and spring grazing, when seeded alone.

The cultural practices, rates and methods of seeding, climatic and soil requirements are the same as for other grasses.

**Perennial Rye Grass.** Also known as English Rye Grass (*Lolium Perenne*). 25 pounds per acre. This particular type of rye grass is used for permanent pasture seedings. It starts quickly and furnishes early grazing, while other long-lived grasses are becoming established. Grows from 2 to 3 feet tall. Adapted to the same soil and climatic conditions, cultural practices and methods of seeding, as other Rye Grasses.

**Italian Rye Grass** (*Lolium Multiflorum Lam*). 25 pounds per acre. A hardy short-lived grass, usually an annual. When seeded in spring, late summer or early fall, it makes rapid growth, furnishing grazing in remarkably short time. It is tender, very palatable to livestock and has excellent carrying capacity. The plants grow from 2 to 4 feet in height. Since Italian Rye Grass is a heavy seeder, if not kept closely grazed or mowed, many new plants appear from volunteer seeding. Adapted to the same soil and climatic conditions as other Rye Grasses.

**Sudan Grass** (*Andropogon Sorghum*). 25 pounds per acre. A tall annual, growing under favorable conditions to height of 4 to 6 feet. The stems are fine, leafy, perfectly erect, seldom lodging.

The plants stool abundantly and owing to the lack of root stocks never become troublesome as a weed. Sudan is grown primarily for forage production purposes and should not be sown until the soil is warm, usually about corn planting time. Many failures are traced direct to seeding in a cold soil. In general climatic and soil adaptations for Sudan are nearly identical with those of corn.

**Tall Meadow Oat Grass** (*Arrhenatherum Elatius*). 30 pounds per acre. A long-lived, deep rooted perennial. Strictly a bunch grass growing to a height of 4 to 5 feet. The stems are generally dark green, leafy above the middle. The leaves are long, broad and rather soft in texture, usually a bright green, almost yellowish. Can be grown on practically any kind of

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soil provided it is fairly moist. Will not endure wet soils. It is one of the most drouth resistant of the cultivated grasses. Makes a quick start after pasturing and stands pasturing well. One of the first grasses to start in the spring and last to die in the fall.

**Timothy** (*Phileum Pratense*). 15 pounds per acre. A perennial grass having a very short root stock and, therefore, grows in more or less compact tufts. The stems, which usually reach a height of from 1 to 4 feet or more, are smooth and generally erect. The leaves are generally short compared with the height of the plant. Timothy is adapted to cold, moist or wet lands, also heavy clay soils. However, does not thrive on sour soils or impoverished sandy or shallow soils. Although root system is shallow it stands drouth fairly well. It is very resistant to cold.

**Tualatin Meadow Oat Grass.** A selection made from the ordinary Tall Meadow Oat Grass, and has the following improvements: It is leafier; the leaves are finer; the vegetative growth is more upright; the stems are finer, rather soft, and reach a height of 4 to 4½ feet; it is much more palatable than ordinary Tall Meadow Oat Grass and will withstand pasturing much better without injury.

The seed production is very good, there being practically no shattering and the seed from this new strain may be planted with a drill.

Soil climatic and cultural requirements are the same as for Tall Meadow Oat Grass.

## MISCELLANEOUS SEED

**Amber Cane.** 30 pounds per acre. This is the most popular variety for the Pacific Northwest. Early in maturity, of medium height, slender stalks, with rather few leaves, grown chiefly for forage.

All varieties are sensitive to cold soils and should not be planted until about two weeks after corn planting.

**Buckwheat.** 25 pounds per acre. An erect growing annual which under ordinary conditions attains a height of about 3 feet. Is not exacting as to soils. The rather

light, well drained sandy loams seem best suited; however, good crops are produced on infertile, poorly tilled land.

Buckwheat is very sensitive to frost; however, the crop may be grown far toward the north. This is due to the short growing season of the plant amounting from 10 to 12 weeks. Japanese and Silver-hull are the most commonly grown in the United States.

**Dwarf Essex Rape.** 8 pounds per acre. There are several varieties of rape, however, Dwarf Essex is considered to be the best, in fact is the only one used for pasture and forage crop purposes. Rape is termed as a cool weather plant, therefore is adapted to our cool moist climate here in the Northwest and is not very exacting as to soil requirements.

**Millet.** 25 pounds per acre. The millets are rapid-growing annuals used primarily for forage production purposes. Requiring in general the same climatic and soil conditions as Sudan grass. The plants usually attain a height of 3 to 4 feet. The stems are erect, rather stiff and the leaves are long and broad.

The seed should not be sown until the ground is warm, usually about corn planting time.

Several varieties are used here in the Northwest, the most popular being German or Golden, Early Fortune or Hershey and Japanese, also known as Billion Dollar Grass.

**Soy Beans.** 50 pounds per acre. The Soy Bean is a leguminous annual growing to a height of 10 inches or more, depending on soil conditions. The plant is erect and branching, quite leafy and producing numerous pods. The leaves vary in size and color, depending on the variety. Soy Beans are a promising emergency leguminous hay crop for various places here in the Northwest.

Soy Beans grow on rather a wide range of soils, are quite drouth resistant, and will stand excess moisture providing the water does not stand for any considerable length of time.

Should be sown about corn planting time, rows about 3 feet apart and the seed about 3 or 4 inches apart in the row.

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